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Estonian experience in the formation of export strategy for dairy products

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CONTENTS

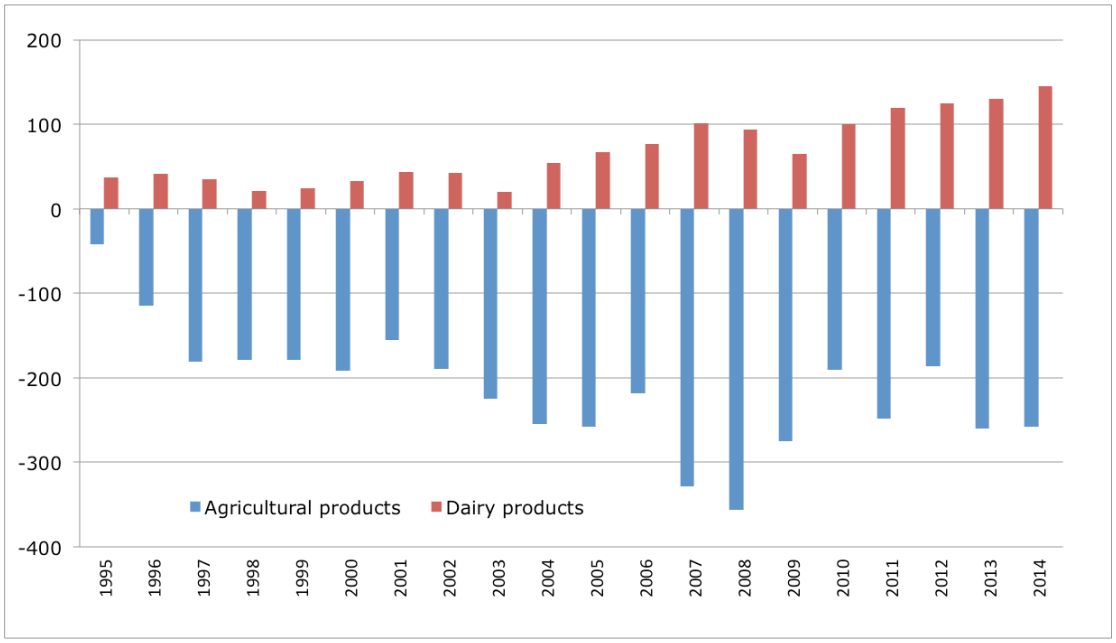
ABBREVIATIONS AND DEFINITIONS USED

BAFTA	Baltic Free Trade Agreement
CEEC	Central and Eastern European Countries
EDA	European Dairy Association
EEA	European Economic Area
EFA	Free Trade Agreement
EU	European Union
Eucolait	European Dairy Trade Organization
FAO	Food and Agriculture Organization of the United Nations
IDF	International Dairy Federation
IPPC	International Plant Protection Convention
OECD	Organization for Economic Co-operation and Development
OIE	World Organization for Animal Health
SKU	Warehousing item that is unique because of some characteristic (such as brand, size, color, model) and must be stored and accounted for separately from other items.
WTO	World Trade Organization

1. INTRODUCTION

Agricultural products and foodstuffs have traditionally played an important role in Estonian foreign trade. Between 1992 and 1994 Estonia was a regular net exporter of foodstuffs and agricultural products (including fish and fish products). In 1995, however, Estonia became a net importer of foodstuffs and agricultural products, except dairy and fishery products. Estonia opened its market to foreign producers of goods, services and capital providers, while for Estonia most of the foreign markets were blocked by customs duties and non-tariff measures.

Chart 1: Balance of foreign trade of agricultural products, 1995-2014.



Source: Ministry of Rural Affairs of Estonia

The dairy sector has been very important for Estonian economy and agriculture, estimated to account for 25 percent of the gross agricultural output (GAO) and 27 percent of food industry output respectively.

Table 1: General overview 1996-2014

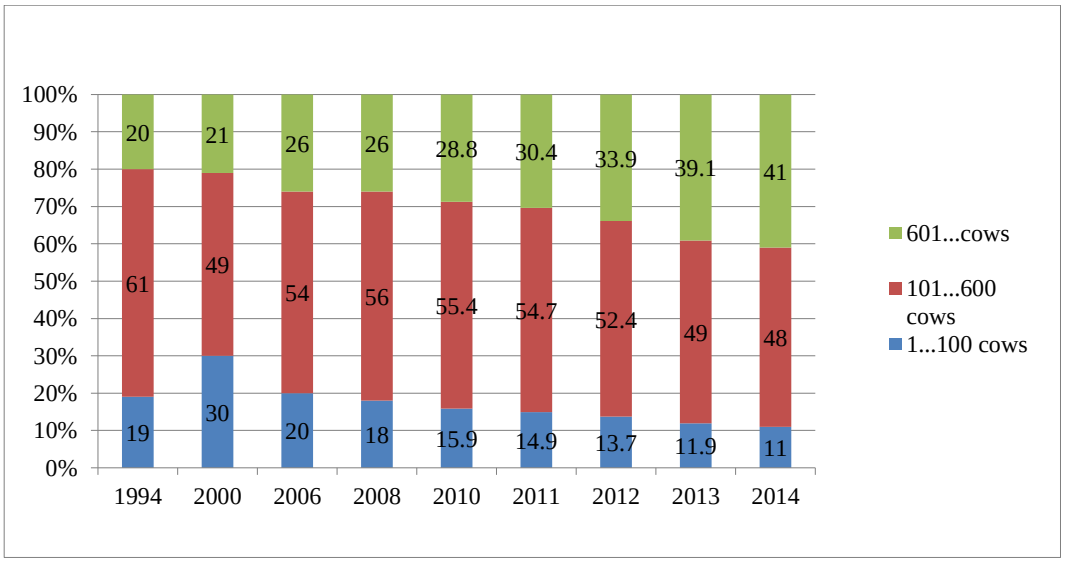
	1996	2000	2004	2009	2014
Share of milk in GAO, %	27	29	30	26,7	27
Share of milk processing in the food industry, %	26	28	32	26	27
Share of dairy products in export of agricultural products,%	33	28	22	15	17

Source: www.agri.ee

1.1. Background of the production and processing of agricultural products

Estonia has long traditions in producing milk and meat products. From the mid-1960s onwards, the production model in Estonian agriculture was oriented towards livestock production based on industrial principles, which aimed at concentrated production and increased productivity. In the Soviet period, the farm structure was largely based on herds of 100-400 cows and this size range continues to dominate the structure of dairy herds. Production is still concentrated at large agricultural enterprises.

Chart 2. Structure of dairy herds by milk production, %

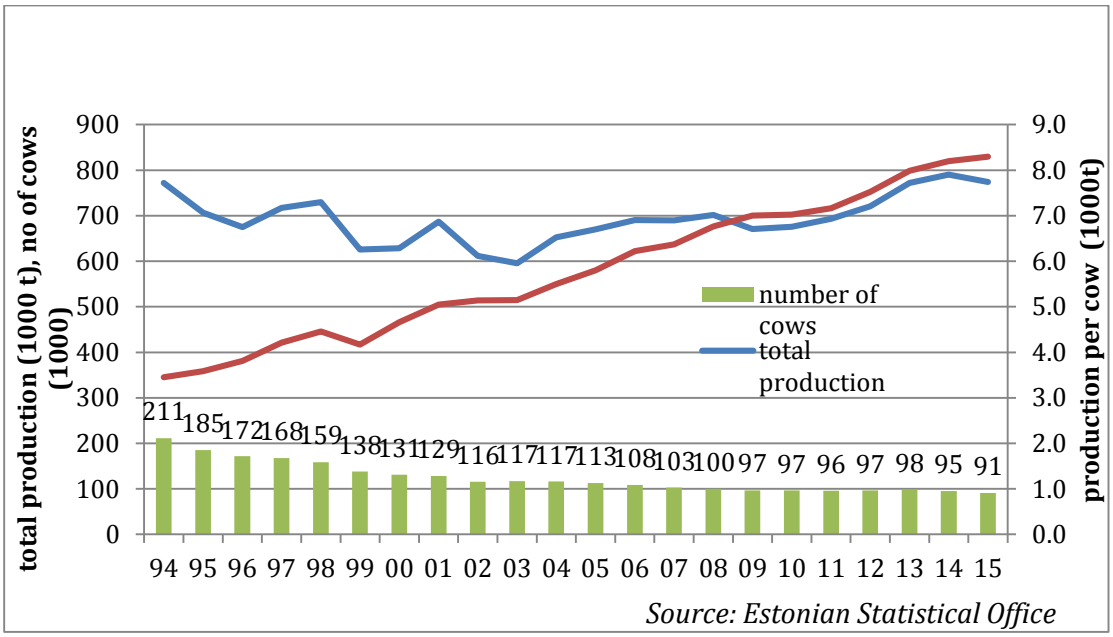


Source: Estonian Livestock Performance Recording Ltd

According to expert opinion, livestock exports accounted for 35-37 per cent of total production at the end of 1980s, with Estonia supplying some of the Soviet Union's largest cities.

After re-gaining of independence in 1991, agricultural production declined significantly. According to the general tendency in agriculture, milk production halved compared to production amounts at the beginning of 1990s.

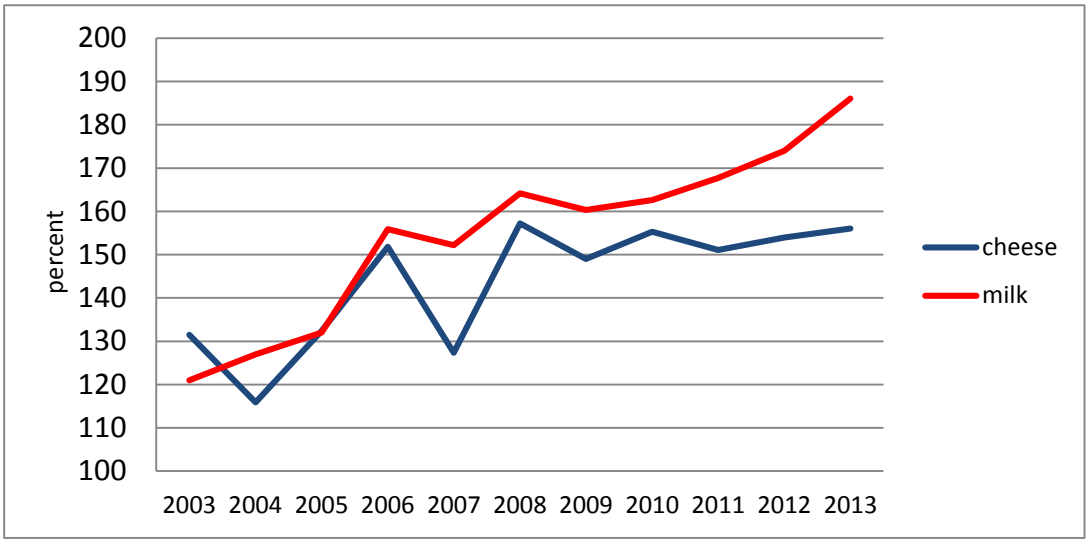
Chart 3. Total milk production, production per cow and number of cows in Estonia, 1994-2015



In the Soviet period milk processing was concentrated at large-scale agro-processing facilities, and immediately before the reform process there were only nine companies (including 20 subsidiaries) involved in milk processing. After the privatization of state enterprises the number of enterprises rose rapidly. Many of the state enterprises also had subsidiaries that were privatized separately. This had a substantial effect on the investments that were later made in order to comply with the international requirements of food safety and quality.

Dairy production in Estonia has met the needs of the internal market for decades.

Chart 4. Self-supply of milk and cheese, %



Source: Estonian Statistical Office

Up until the beginning of the 1990s 35-40 percent of dairy produce was exported from Estonia. Since 1995, dairy products have accounted for around one third of all agricultural exports. Therefore, the surplus production compared with domestic consumption the dairy sector is very export oriented and is heavily influenced by export opportunities.

Table 2: Share of dairy products in export of food products and agricultural products, 1996-2014, %

	1996	2000	2002	2004	2006	2008	2010	2012	2014
Share of dairy products in export of food products	n/a	n/a	n/a	40	30	34	36	25	45
Share of dairy products in export of agricultural products	33	28	22	22	18	17	17	15	16

Source: Estonian Statistical Office

2. ESTONIAN EXPERIENCE

There are three main stages in the the Estonian experience in the formation of export policies.

1. **1991-1995** – The restoration of Estonia's independence and the creation of its own border regimes for its own exports;
2. **1995 -2004** – Estonia's preparation for EU membership, during which it fulfilled the preconditions for membership. This stage also included membership in international standard setting organizations (*Codex Alimentarius*, WTO, IPPC) and several studies by EU analytical assistance (sector studies); FTA with EU and EEA, BAFTA
3. **From 2004** – Estonia became an EU member and part of the EU internal market. It started exports to third markets, applying EU export policies

From a different perspective, other aspects can be distinguished in these time periods. These include international recognition (membership in international organizations first of all standard setting (WTO, Codex, OIE, IPPC) but also professional organizations (EUCOLAIT, IDF, EDA) in parallel to the adjustment of national legislation to international requirements; national support measures and organizations to promote trade and competitiveness of domestic products and consolidation of producers to sector organizations to be unifying partners for the government by policy design.

2.1. First period: 1991-1995

Keywords: The restoration of independence, opening the borders, the abolition of restrictions in export and import, the reorientation of foreign trade from the east to the west. Government State policies from 1991-1998 – creating preconditions for accessing new markets and investment promotion; formation of the Estonian Export Agency and Export Credit Fund; formation the Estonian Chamber of Agriculture and Commerce; international food fairs; quality labels and food contests.

After independence Estonia abolished all export obstacles, including export licensing. To stimulate exports, several general measures were implemented, encompassing all products, including agricultural products.

The opportunities for the Estonian state to support the promotion of agricultural products and foodstuffs were limited due to a lack of public funds and know-how.

Generally the following measures which promoted agricultural products and foodstuffs were nationally supported: quality and origin signs, collecting market information and disseminating it, market research studies, contact events (fairs, exhibitions, product presentations), product development, public relations and training.

Although Estonia tried to re-orient its agricultural trade towards the Western-European markets, exports to those markets remained limited. Tariff and non-tariff barriers implemented by Western-European countries were the main obstacles to expanding exports to Western partners.

In 1994 the government accepted a **decree on support to exports**, the goal of which was to increase the potential and success of Estonian exports, the diversification of its structure and the provision of support to small and medium-sized businesses in going to the international markets. National export support was given to companies and organizations that were developing export capabilities.

One of the principles for giving this support was favoring **domestic raw materials** and giving those materials higher levels of processing. Taking part in international fairs, compiling promotional and information materials and distributing them, using consultants in figuring out export potential of companies, hiring export managers, conducting market researches and applying for patents and registering trademarks were also supported. The maximum grant rate for entrepreneurs and organizations was 50 percent of the amount requested of the project. Applications for the grant were examined by the special commission under the Ministry of Economy. The majority of the grants were used for participation in foreign exhibitions and production of promotional materials.

The Estonian Dairy Association as an organization that brings together dairy manufacturing companies that received grants to participate in several international fairs

such as: Anuga, Sial, Prodexpo (in Moscow), Foodexpo (St.Petersburg), FISPAL (Brazil), AgroBalt etc.

Two fairs that received state funding in their entirety are worthy of mention; namely, **The Green Week** in Berlin, Germany and **AgroBalt** in Lithuania. These fairs helped to promote the Estonian brand and created consumer confidence in Estonian products in general, rather than focusing on establishing business contacts.

Estonia first took part in the Green Week in Berlin in 1994 and since then Estonia has had a stand there every year. In 2014 Estonia was the partner country in the Green Week.

Whether Estonia's participation in this fair should be nationally supported and what the benefits of taking part have been so far have been topics for national discussion. The goal of participating in the fair is first and foremost to create an image of the state as a reliable partner. Another main goal is to introduce Estonian culture and traditions. The goal is not to sign specific trade agreements, although considering the huge number of participants networking is also important. Therefore the opportunities created by the Green Week in Berlin should not be underestimated.

Export aid was organized by the Ministry of the Economy. Since 1998 this function has been transferred to the Estonia Trade Promotion Agency which was created to promote export in the management area of the Ministry of Economic Affairs and Communications.

In 1994 the Estonian Export Credit Fund was created. From this fund companies registered in Estonia were able to get cheap loans in order to develop exports. In order to get loans companies have to present a business plan, which has to be approved by the Fund's council. The loan could cover up to 75 percent of planned expenses, which should not have been over EEK 1 million and which must be used within one year. The maximum interest rate that Estonian Export Credit Fund could demand from companies was 18 percent per year.

The financial resources of the fund came from four sources: state budget, foreign loans given to the Republic of Estonia, the fund's own resources and donations. The fund had a budget of EEK 15 million in 1994. In later years the foundation was merged with several other organizations and today their functions are carried out by the Agency Kredex.

After independence all import barriers for agricultural goods and foodstuffs were lifted, including customs import licenses and external measures. During the 1990s a large quantity of subsidized foodstuffs were imported to Estonia (mainly from the EU). Many new providers entered the market with products, which with their novel packaging, new composition and taste, cheaper prices and aggressive marketing and sales tactics quickly gained success.

Yoghurt is a dairy product that was relatively unknown in Estonia up until the beginning of the 1990s. Relying on the observations of the Estonian Institute of Economic Research in 1995 there were 2.5 SKU (stock-keeping unit) of domestic yoghurt available in Estonian shops. During a couple of years this number increased to 20 SKU and in 2004 the number had reached 64 SKU.

The development of a variety of dairy products in the Estonian retail sector can be observed in the following table, which presents SKUs of dairy products of Estonian origin.

Table 3. Number of dairy products (SKU-s) in retail sector in Estonia.

	1995	1998	2000	2002	2004	2006	2008	2010	2015
Drinking milk	1.3	6.0	7.0	7.5	8.7	8.5	8.2	8.8	9.1
Cheese	4.3	7.0	12.7	16.5	30.8	39.6	44.4	52.3	39.3
Yoghurt	2.5	20.0	34.1	41.9	64.1	67.5	63.9	60.2	53
Butter	1.2	1.1	1.4	1.4	2.5	4.0	3.7	4.9	6.1
Ice - cream	3.0	25.5	47.2	61.4	75.2	83.8	79.8	72.7	28

Source: Estonian Institute of Market Research; TNS Emor

This development was supported by a contest aimed at product development called “The Best Estonian Food Product” and also the release of the quality mark “Approved Estonian Taste”.

Legislative developments were also important as they made bringing new products to the market much more flexible

Table 4. The share of domestic dairy products in the turnover of Estonian retail sector (%)

	1995	1998	2002	2004	2010	2013	2015
drinking milk	100	100	100	100	98	87	92
cheese	97	94	90	61	73	73	80
yoghurt	40	65	85	83	89	66	79
butter	100	99	100	94	97	76	79
ice-cream	49	65	82	83	84	64	64

Source: Estonian Institute of Market Research; TNS Emor

2.1.1. The contest “The Best Estonian Food Product” (Eesti Parim Toiduaine)

Every year since 1994 the Estonian Food Industry Association has organized a contest called “The Best Estonian Food Product”, which since Estonia joined the EU has been called “The Best Food Product”.

The goal of the contest is to encourage the Estonian food industry to develop products for the Estonian food market and also for export, to introduce new foodstuffs and their manufacturers to the consumer and market, to develop a warm attitude to and trust in domestic food and the food industry (the Estonian Food Industry Association). The contest for the title of the best foodstuff is divided into food groups including dairy, meat, fish and beverages. The bases for assessment, which is done in collaboration with experts, are the sensory properties, packaging, novelty, export potential, sales volumes, dynamics and the overall healthiness of the product. The first stage is to find the winners of each product group and then one product is selected as the best Estonian food product. The winners are introduced through media commercials and adverts at sales locations with

tastings and information about the qualities of the product. The contest is still very popular among entrepreneurs. A dairy product has been proven to be the best foodstuff in Estonia nine times since 1994. The contest is supported by the state. In the beginning the Ministry of Economy was the main supporter, but today various marketing support schemes are available.

2.1.2. Foundation of the Chamber of Agriculture and Commerce

By the beginning of the 1990s many agricultural associations were created, including the Central Union of Estonian Farmers, the Estonian Dairy Association and the Estonian Agricultural Producers Central Union. In reality there was a need for an umbrella organization to unite all undertakings engaged in agriculture. From one side the state lacked a considerable social partner and from the other the organizations in the sector were too fractured to protect their positions when negotiating with the state. A joint marketing system for agricultural products and foodstuffs was also lacking.

Due to the complicated situation in the economy and the social sphere an umbrella organization could not be voluntarily set up and a group of enthusiasts from Parliament, the Ministry of Agriculture and the sector decided to use legislative pressure to set up the organization.

On 25 September 1995 Parliament passed a draft law which stipulated the core principles for the founding of the Estonian Chamber of Agriculture and Commerce and also its tasks and rights. The state also committed to supporting the chamber for three years.

The Estonian Chamber of Agriculture and Commerce was founded on 28 March 1996.

The main activities were:

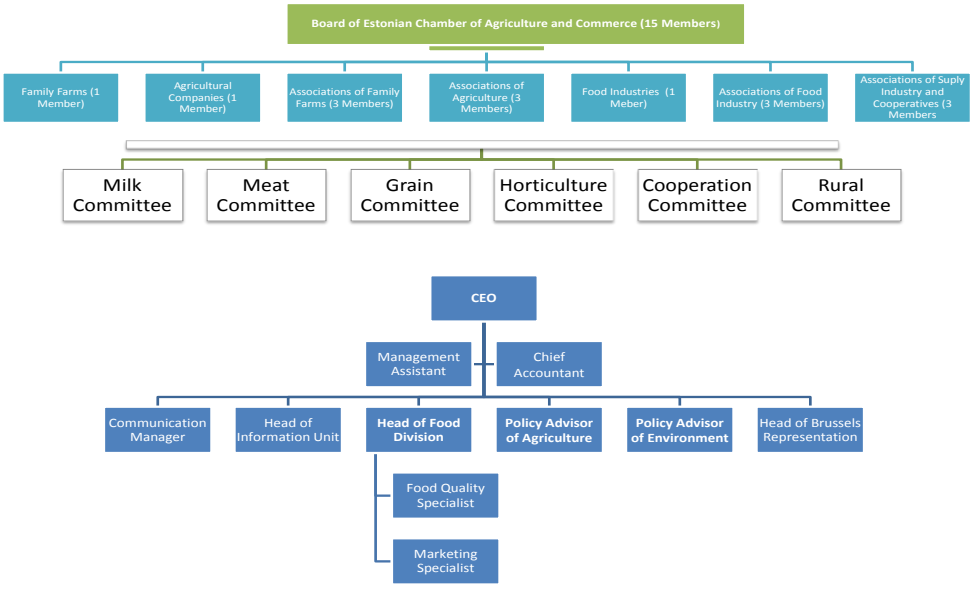
- Conducting negotiations with the Government on agricultural policy issues.
- Organizing specialized forums – milk, meat, grain and horticultural forums to discuss the state of the sector and make suggestions to the state.
- Collecting, processing and disseminating market information about agricultural products and foodstuffs to its members. Information about domestic and foreign markets appears on an ongoing basis and is published on the website and is also

sent directly to the members of the chamber. To date “Milk Market”, “Meat Market”, “Grain and Oilseed Market” information has been published.

- Conducting projects at the request of the state, which are aimed at raising consumer awareness, promoting healthy food and especially the formation of healthy eating habits among school age children. These included “School Milk” a preparatory project, to be able to merge with the EU, “Milk made” to promote Estonian milk and dairy products, “School bread” and “Fruit and vegetables”.

In 1997 an Estonian Agricultural Exchange was created in collaboration with Notre Dame College, in which there was a lot of interest, but very few real transactions were conducted, so the exchange was shut down.

Chart 5. Organizational structure of the Chamber of Agriculture and Commerce



Today the Chamber of Agriculture and Commerce is a social partner of various state institutions including the Estonian Parliament, the Ministry of Rural Affairs and the Ministry of Foreign Affairs.

The representatives of the Chamber of Agriculture and Commerce are participating in different working groups which have been established in order to draft appropriate development plans and legislation in the agro-food sector.

A crucial part of the work that the Estonian Chamber of Agriculture and Commerce does is the promotion of agricultural products and food and joint marketing activities aimed at promoting products made in Estonia on both domestic and foreign markets.

2.1.3. Quality labels

The Estonian Chamber of Agriculture and Commerce started developing a label which signified food quality in 1997. The project for assessing and badging the quality of Estonian food products was born out of the collaboration of the Estonian Chamber of Agriculture and Commerce and the German Agricultural Society (Deutsche Landwirtshafts- Gesellschaft – DLG).

The goal of these kinds of badges was to help consumers navigate a colorful food market by highlighting the competitive advantages of good and high-quality Estonian products. They also started introducing products bearing quality badges at international fairs.

The first "Approved Estonian Taste" badges (clover badges) were given in autumn 1998. In 2000 the "Approved Estonian Taste" badge, which used a swallow as its symbol, was launched. It signified Estonian origin of the basic raw materials and also high quality. Due to regulations from the European Union, since 2004 the clover badge of "Approved Estonian Taste" (clover badge) was changed to "Approved Taste". The EU regulation aims to prevent a promotional war between the Member States. In light of this Member States were barred from using country names in the supported labels.

The "Approved Taste" clover badge is given to products that are produced in Estonia and successfully pass the laboratory and sensory evaluation. The country of origin of the raw materials is not important in the case of the clover badge.

The swallow badge is given to products that are made **only using raw materials with Estonian origins** and that also successfully pass the laboratory and sensory evaluation.

All companies that are in the Estonian business registry can apply for the badge provided they can prove that they only use raw materials of Estonian origin in manufacturing the product in question. The aims of the "Approved Estonian Taste" badges of quality and origin are to add value to Estonian products in the Estonian market, to support the domestic sales and export of Estonian food products, to offer advantages to Estonian manufacturers in their competition, to motivate manufacturers to use raw materials of Estonian origin in their products and to increase consumer confidence in the quality of domestic products.

The channels that the Estonian Chamber of Agriculture and Commerce uses to advertise products that have a badge are: fairs and outdoor events, product exhibitions, information

materials, tastings, cooperation with the AS Selver food store chain with a campaign called “Good and Domestic”.

The system that gives out badges is certified by the Estonian Accreditation Centre.
Badge statute – in Annex 1
Badge familiarity – in Annex 2

2.1.4. Market information

The goal of collecting market information, distributing it and doing market research is to ensure market transparency. Market information is used by the state administration to design policies and by entrepreneurs to make decisions regarding the market.

Having this information and the ability to continuously report this information was a prerequisite for joining the EU. Entrepreneurs need information (statistics about foreign trade, prices, incomes, consumer spending etc.) for operational management and strategic planning. Consumers need it to make purchasing decisions and to protect their interests.

Estonia started collecting, processing and distributing this market information in 1998. By request of the Ministry of Agriculture the Estonian Institute of Economic Research and the Chamber of Agriculture and Commerce were tasked with this assignment. They started by collecting the world purchase prices for raw materials and the world prices for agricultural products, to which manufacturer and wholesale prices were added over the years. The development of the collection of market information largely came about due to demand from the EU to receive regular information about the market for agricultural goods.

At the initiative of the Ministry of Agriculture regular researches about consumer purchasing prices, the share of import and domestic food products in shops, retail prices of various foodstuffs were ordered and market reviews in the context of different agricultural products were conducted. Special methodologies were developed for market research and a number of experts were trained to carry out the studies.

The initiative if the Ministry of Agriculture was based on an interest in how the agro-food sector had developed and how state support could be targeted. The EU accession process brought an obligation to collect the prices of specific agricultural commodities and report

them to the EU Commission. In the dairy sector the prices of raw milk, skimmed milk powder and butter were requested by the EU Commission. In addition, the Ministry of Agriculture included some more products to this list with the purpose of making the food market more transparent. All the data is available in electronic databases.

The investigator of the studies is selected through a public tender and in the last couple of years it has been a private company called TNS Emor. Before that it was the Institute of Market Research. Other market related and more specific studies are ordered by the Ministry of Rural Affairs on-demands, using a public tender selection process. All of these studies are published on the website of the Ministry.

The Estonian Chamber of Agriculture and Commerce collects, processes and distributes market information on agricultural products and foodstuffs to its members. Information about domestic and foreign markets appears on an ongoing basis and is published on the website and also sent directly to the members of the chamber.

2.1.5. Harmonization of food legislation and food supervision system according to the international principles

One of the most important steps for raising the competitiveness of the domestic market and expanding export possibilities was the starting of drafting of legislation in 1992 for food safety and food inspection and creating a food inspection authority which was based on international standards.

Until 1992 Soviet quality standards were applied in Estonia. Quality control was exercised by the veterinary control system and the health control system. The veterinary service controlled animal health as well as slaughtering and meat processing enterprises. The health control service was responsible for inspecting all processing enterprises (including food of animal origin) as well. For food processing companies this meant double controls. In accordance with these respective international standards a new food control system was introduced in Estonia.

In addition, in connection with the European Union Association Agreement a commitment was made to harmonize *acquis communitaire* in the areas of veterinary, phytosanitary and food control. This effected the development and implementation of requirements by Estonia the most.

2.2. Second period: 1995-2004

Keywords: Preparation for joining the EU, (Free) trade agreements, tariff quotas, search for importers in target countries. Membership in international organizations, harmonization of legislation to the requirements of international organizations and the EU, studies by international organizations (FAO, OECD) and consulting companies.
A national program "Milk" - the modernization of the milk sector, finding new export markets, the promotion of milk (also in the domestic market). The formation of a calendar for important fairs. The foundation of Enterprise Estonia. Joining professional organizations and the exchange of information (EDA, Eucolait)

2.2.1. Policy options

In the second half of the 1990s, Estonia (as many of the CEECs) increased efficiency, made institutional reforms and was obliged to develop appropriate strategies for accession to the European Union. Estonian policy was dependent on the international agreements Estonia had concluded since independence. The two most important ones were the European Agreement and WTO membership agreement.

The EU had become the main trading partner for Estonia and preferential tariff quotas for agricultural products had been agreed in quantities covering the bulk of Estonia's export potential.

In general, the WTO's impact on harmonization policy was much smaller than the impact of EU accession. However, WTO membership was a precondition for EU membership.

An important pre-condition for the use of the quota was complete conformity of processing conditions to the requirements set in the EU regulations, which was especially important in processing food of animal origin. Therefore, the quotas increased the incentives for enterprises to fulfill the food safety requirements to actually benefit from export opportunities. Furthermore, access to the EU market was attractive to enterprises due to higher prices and higher margins.

EU membership was the main strategic objective of Estonia for a number of years. The

target date defined for Estonian accession was 1 January 2003. All plans were designed in this light and in principle Estonia was ready to meet all requirements (even those relating to the environment) and did not apply for transition periods in order to gain unlimited access to the common market of the EU.

However, in the scope of the association agreement with the European Union, Estonia accepted an obligation to accept all policies and objectives of the EU without any reservations.

That obligation had the main impact on the preparations of legislation and control systems.

However, the EU accession procedure highlighted the **fulfillment of the technical requirements set for processing of agricultural products** in the Estonian food industry. Further production of food, both for the Estonian and EU markets, as well as for exports to other countries directly depended upon fulfilling these requirements.

A special feature of Estonia was that all processing facilities were EU fit without a transition period for adopting EU food safety requirements. From the 10 candidate countries only Cyprus was in the same position. Generally speaking Estonia fulfilled the main goal of joining the EU **without a transitional period.**

Meeting the technical requirements demanded substantial investments which made the opening of international markets possible. It is important to achieve optimal levels of investments and it is not rational to invest in unutilized processing capacities.

Estonia was unfortunately unable to reach this goal, as in some sectors investments were not made in time while in others there were a lot of over-investments. Food safety was the main priority of the government and the food processing enterprises as well.

All food operators have to take care of that and make necessary investments. On the other hand, the role of the government is to realize institutional reform and apply the legal framework in the field of food safety.

The obligation to comply with the food safety requirements directly influences the number of operating enterprises. As a matter of fact in transition economies it is not easy to specify appropriate periods and measures for implementing the requirements.

Estonia submitted its application for WTO membership in March 1994 and became a member in November 1999.

2.2.2. Trade agreements.

In July 1994, a free trade agreement was signed between Estonia and the European Union, which came into force on 1 January 1995.

The Europe Agreement, which was signed in June 1995, took over the trade concessions of the Free Trade Agreement. The Europe Agreement gave Estonia the status of associated country with the EU and envisaged Estonia's full membership to the EU.

EU membership was the main strategic objective of Estonia in the following years. That was the base for future planning, in broad terms meaning the harmonization of legislation with that of the EU. A detailed plan was laid down in the National Plan of Adoption of the *Acquis* (NPAA), first set up in 1996 and updated every year before accession.

The EU has become the main trading partner for Estonia and preferential tariff quotas for agricultural products have been agreed in quantities covering the bulk of Estonia's export potential. **The conclusion of a Free Trade Agreement and the accession procedure with the EU has highlighted the fulfillment of the technical requirements set for processing of agricultural products in Estonian food industry.**

Further production of food for both the Estonian and EU markets, as well as for export to third countries directly depended on this agreement.

Achieving a standard of food safety was necessary for the development of internal and external markets. The respective legal framework and appropriate supervisory system had to be created.

The state supported the necessary research into potential products in different markets and sectors. The dairy sector was one of the main priorities.

2.2.3. National program "Milk"

In 1995, under a directive from the Ministry of Agriculture, a working group was formed to develop a national program called "Piim" (Milk). The goal was to develop a broad package of measures needed for the dairy sector to conform to EU regulations.

The program intended to draw up regulations, standards and technological applied research, which when implemented would guarantee success in export markets. In addition to this, activities were planned to promote milk as a healthy food and opportunities for new export markets were to be explored. The program was initially planned to span seven years. Financing was done annually in accordance with the agenda drawn up for that year. In reality, however, the financing for this program was halted in 2000 in response to changes that were made to the principles of how the state purchases work and services. Henceforth, only individual issues that were important for joining the EU were financed. Between 1997 and 1999 the total funding the program was approximately EUR 1 million which was a grant from the State. That amount was split between technological applied research (dairy cattle keeping and feeding, raw milk quality, new technologies in dairies etc), market research studies (including export markets), promotional campaign "Clean Nature – clean dairy product", seminars and conferences for the entrepreneurs. Part of that grant was allocated to upgrading milk and feed testing methods and laboratories.

In order to implement the program a contract between the Ministry of Agriculture and Estonian Dairy Association was concluded. The Estonian Dairy Association made an annual work plan, a detailed list of activities and was responsible for reporting.

The work done in the program "Milk" should still be considered important because it provided the groundwork for the consistent development of Estonian milk exports and helped to achieving the required standards for potential export markets.

2.2.4. Enterprise Estonia.

In 2000 the work of agencies and establishments that provide export support was re-organized and a joint institution called Enterprise Estonia was created. This institution pooled the Tourism Agency, the Regional Development Agency, the Agency of

Technology, the Estonian Transit and Infrastructure Development Agency, the Foreign Investment Agency and the Export Agency.

Established in 2000, Enterprise Estonia promotes business and regional policy in Estonia and is one of the largest institutions within the national support system for entrepreneurship, providing financial assistance, consulting, cooperation opportunities and training for entrepreneurs and research institutions in the public and non-profit sectors. Operations support the accomplishment of the long-term strategic objectives of the Estonian economy. To achieve this, Enterprise Estonia supports the development of export-capable enterprises that create higher additional value.

Following Estonia's accession to the EU, Enterprise Estonia became one of the agencies implementing EU structural funds in Estonia. During the 2007-2013 EU financing period, EUR 784 million (EEK 12 billion) of the more than EUR 3.4 billion (EEK 53 billion) of structural aid to Estonia was implemented by Enterprise Estonia. In the EU's new, 2014-2020, funding period the Structural Funds budget is EUR 3.5 billion, of which EUR 588.1 million is to be implemented by Enterprise Estonia.

The main characteristics of the Enterprise Estonia today:

- Total number of employees 270- 300.
- Budget for 2014 – 2015: EUR 216 million.

The Enterprise Estonia network reaches every county in Estonia. It has its regional office in Tartu and is in close cooperation with County Development Centers and Tourist Information Centers.

It has foreign representative offices in Helsinki, Turku, Stockholm, Oslo, Hamburg, Frankfurt, Nuremberg, London, Copenhagen, Paris, Moscow, St. Petersburg, Rotterdam, Shanghai, Tokyo, and Silicon Valley, California.

Enterprise Estonia is managed by a three-member management board and a supervisory board, consisting of the country´s top entrepreneurs, officials and members of Parliament. In addition, advisory boards consisting of the top experts in each of the areas of Enterprise Estonia´s responsibilities give the organization advice and guidance in return for up to date information on future plans and opportunities.

2.3. Third period 2004 – present

Keywords: joining the EU, new possibilities; since 2005 state budget funded Market Development Grant – projects "Milk for Life" and "Milk Stream"; Funding for taking part in fairs, export crediting institution KREDEX; EU promotion measures; Estonian Dairy sector strategy paper.

2.3.1. Export crediting fund KREDEX.

The Fund KredEx was founded in 2001 by the Ministry of Economic Affairs and Communications with the aim of improving the financing possibilities of enterprises, managing credit risks connected with exports, enabling people to build or renovate their homes and develop energy-efficient ways of thinking. Through the years, KredEx has become a considerable link between the Estonian financing institutions and loan applicants, exporters and foreign buyers.

KredEx offers financing services for managing financial risks and implements the development plan of the Estonian housing area. The task of KredEx is to offer solutions based on the strengths of all interested parties, coordinating and supporting the relevant development activities to the possible extent. This is done through state guarantees as well as knowledge and skills.

Services offered by Kredex.

Financing of enterprises:

a) **Start-up loans:** Start-up loans with KredEx guarantees are suitable for new enterprises and those that have been in operation for up to three years for financing of investments and operating capital. Start-up loans help if there are difficulties in starting a company due to a lack of start-up capital, and there are no sufficient guarantees for bank loans or operational history. Unlike a conventional bank loan, fewer guarantees are required from entrepreneur taking out start-up loans. Generally, the personal surety of the physical owners of the loan recipient is sufficient to guarantee the loan. The personal liability of the surety provider is 40

percent of the loan amount, if the loan is used for the intended purpose.

b) **Business loan guarantee:** Business loan guarantees are designed for companies that require financing of their operations. Loan guarantees allow companies to use bank loans, leases or bank guarantees even if they lack sufficient guarantees or operating history.

c) **Technology loan:** Technology loans are designed for export-oriented enterprises in the areas of processing industry, mining industry, production, transfer and distribution of electrical energy and waste processing and disposal. They are designed for investing in machines and equipment. Technology loans help get bank loans or leases for investment, even if they do not have the required capital for self-financing. Similarly to the owner of the enterprise, KredEx gives capital as a subordinated debt made available to the entrepreneur, which in the eyes of other financers increases the self-financing of the enterprise. This makes it possible to receive additional leases or bank loans and thus helps the company to grow more quickly. KredEx does not interfere in the management of the enterprise that receives the loan.

d) **Capital loan:** Capital loans are aimed at companies that have proven the operability of their business model and that are planning development investments. Capital loans help companies that want to achieve fast growth with loan capital, but their level of self-financing is too small or the collateral is insufficient for obtaining a bank loan. Similarly to the owner, KredEx will agree to the use of the company capital, which due to its subordination increases the level of self-financing in the eyes of other financiers. This in turn enables the inclusion of additional funding, e.g. a bank loan.

e) **Export loan:** Export loans are meant for companies wishing to finance large-scale export transactions of goods manufactured in Estonia. Export loans help if a company wishes to offer a long payment term to a foreign buyer, pay a credit insurance premium or finance the production of goods to be sold to a foreign buyer. A prerequisite for issuing these loans is insurance of credit and political risk related to the foreign buyer at KredEx Krediidikindlustus.

KredEx Credit Insurance was founded in 2009 by foundation KredEx and the Ministry of Economic Affairs and Communications

KredEx Credit Insurance is a state-owned insurance company that helps Estonian companies manage credit risks connected both with exports and domestic sales.

A wider goal of the activities of KredEx Credit Insurance is to increase the awareness of Estonian companies regarding credit management, improve their financial stability with the help of insurance solutions and facilitate the development of international trade relations and financing possibilities of Estonian companies.

2.3.2. Market development support scheme.

Since 2005 Estonia has implemented a state financed joint marketing instrument of market development support, which can be applied by any organization that represents entire sectors rather than individual companies. The market development scheme was created on 28 April 2005 in decree no 49 issued by the Minister for Agriculture, which approved the procedure for applying and processing applications for the market development support and the list of expenses covered by the support and the support rate activity by activity. The decree has been updated almost every year to continuously improve the functioning of the scheme. Applications can be submitted by non-profit organizations at least two-thirds of whose members are agricultural manufacturers, agricultural processors or non-profit organizations that unite them.

During 2005-2015 there have been eight activities for which you could apply for support:

Market research, collecting market information and analyzing and distributing it, product development (only in 2005), introducing agricultural produce, products and processed goods, taking part in and organizing competitions, fairs and exhibitions, training courses and study tours, issuing and introducing quality badges, implementing a quality management system and implementing a quality badge system.

This support is funded from the Estonian State budget and it is a co-share support where the support rate depends on the activities that project is applied to.

Over the years the support rate has changed from approximately 75 percent to 90 percent. In reality the support rate is lower because when an unexpectedly high number of applications are received all accepted projects are reduced.

During 2005-2016 the total amount of support was EUR 6.6 million. According to statistics from the Ministry of Rural Affairs, the majority of the support was spent on the promotion and introduction of agricultural and food products on the Estonian market. Between 2005 and 2008, from the total budget the share of spending for the participation in international fairs was between 12 and 20 percent. In the last couple of years the share of promotion and introduction of agricultural and food products has rose up to 60 percent out of the total budget and share of spending for international fairs has fallen up to 10 percent.

There might be several reasons why this has happened but one of the factors is the concentration of the food sector. Export oriented companies have increased in size although there are now fewer of them in total.

The Estonian Dairy Association took part in the scheme from 2005 and 2014.

2.3.3. Estonian dairy sector strategy.

A targeted dairy sector strategy was developed to improve a common understanding of the sector stakeholders and the government about the strategic goals of the dairy sector. There orientation to exports was defined as a strategic objective. The initiative came from the Estonian Dairy Association in 2009. A working group was established by the Minister of Agriculture, but generally a bottom-up approach was taken. After three years of discussions an agreement was concluded. The strategy paper is a voluntary agreement between the Ministry of Agriculture, milk producers and processing organizations. (Annex 3)

Besides the dairy sector strategy there are also several development programs

a) Development program for the grain sector 2014-2020
b) Development program for the organic production 2014-2020
c) Development program for the horticulture production 2014-2020
d) Development program for the seed production 2014-2020

The objective of the Estonian dairy strategy is to increase the volume of milk production and processing and to ensure sustainability by 2020. By this deadline, the present economic status of Estonian undertakings operating in the field of milk production and processing will be mapped, the further possible development trends of the dairy sector

will be found out, a vision for 2020 will be defined and the measures necessary to achieve the strategic objectives will be described.

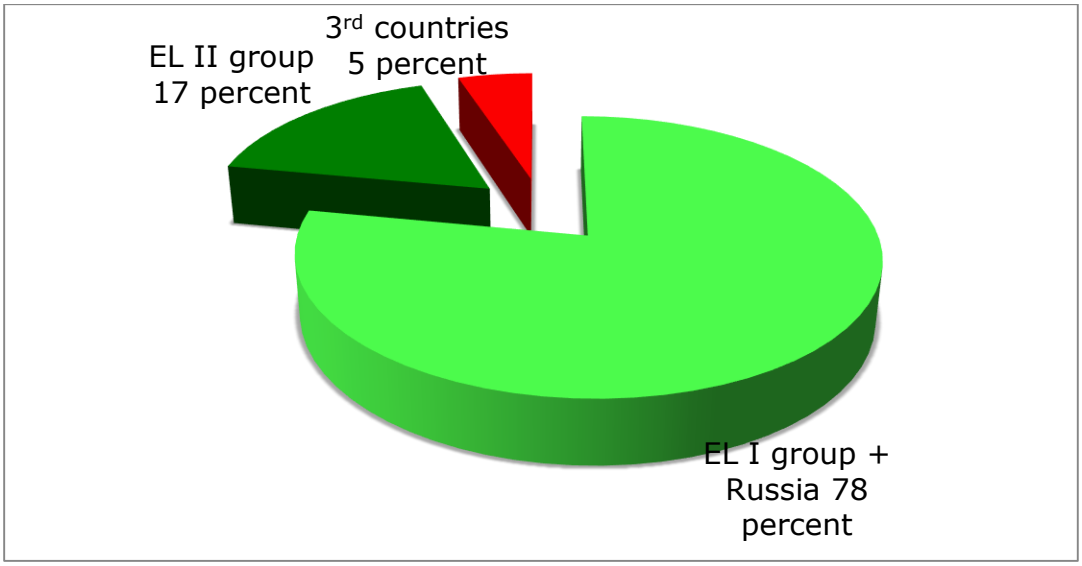
The vision of the Estonian dairy sector is to be sustainable and competitive oriented toward the production of high value added milk products that meeting market demand (including increasing volume of organic products) and toward export, supported by vertical and horizontal cooperation.

In 2020, the Estonian dairy sector will be oriented towards joint activity, will create high value added (including health promoting biotechnological products), a large portion of the products will be exported and the volume of farm dairy and organic products will have increased. Milk production has maintained its priority in the agricultural sector. Increased competitiveness, regional and structural balance of production and sustainable production practices, along with higher production and processing efficiency ensure the sustainability of the dairy sector. Sector employment is guaranteed and the efficiency of production and processing increases thanks to the application of new technologies and knowledge. The system of in-service training and retraining has been developed and applied in the dairy sector.

The educational institutions teaching the specialties needed for agriculture and food industry have high level and are popular among young people. Crisis backup measures have been developed for (market) crises and epidemic outbreaks.

Taking about Estonian dairy exports we can define three stages: from 1991 to 2004 orientation to the EU market was taken; from 2004 to 2014 EU market and third countries, mainly Russia. This was because before 2004 double tariffs were applied and after Estonia joined EU double tariffs were removed and 2014 and beyond situation today we are faced with. Due to the crisis in EU dairy sector the main challenge for Estonian dairy exporters is how and where to find new markets.

Chart 6. Export of Estonian dairy products by countries in 2014



Group I – Latvia, Lithuania, Finland, Sweden **,**Russia

Group II – Germany, Norwegia, UK **,**Denmark, Holland, Italy

Group III - Saudi-Arabia, Lebanon, Maroko, LAV, Emirates, Egipt, Malaisia, Tai, Vietnam, South-Korea, Afganistan, Iisreal, Singapur, Japan

Source: Ministry of Rural Affairs; Estonian Dairy Association

2.3.4. Development program "Estonian Food" for 2015–2020

The objective of this development program is to increase the sustainability of the Estonian food sector, to improve the image of the Estonian food sector and to contribute to the development of good cooperation between the different players in the food sector.

Background to the development program

The first time that Estonia implemented a development program in order to promote local food was in 2006-2008. The purpose of this development plan, which was called "Estonian Food", was to map out the situation of production, processing, marketing and consumption of typical Estonian food, to shape the public image of Estonian food, to improve the competitiveness of Estonian groceries and to consumer satisfaction with Estonian groceries. The development program was designed to support the sustainable growth of the food sector, to inform the consumers and to protect their interests.

The new Estonian Food Development Program was implemented in 2014. State institutions and different organizations from the sector collaborated in creating the vision document. The new strategic document "Estonian Food 2015-2020" was signed by the Minister of Agriculture in December 2014.

The aim of the program "Estonian Food 2015-2020" is to create and develop the image of Estonian Food both in Estonia and abroad, to enhance the co-operation of food sector parties and to develop new export opportunities for Estonian food sector enterprises. Activities are focused on Estonian and foreign markets. Pre-school and school children are also considered an important target group.

Overview of the actions planned.

a) Actions towards the **Estonian market**:
It is planned to introduce Estonian food at local cultural events more actively, to develop Estonian regional cuisine and local food culture and to develop institutional catering by encouraging caterers and food producers to cooperate more closely. An important goal is to raise awareness about food labeling among consumers.

b) Actions related to developing **export opportunities** and creating a good image for Estonian food in the foreign markets:
In order to reach those goals, it is important to introduce Estonian food at international events, including cultural events and fairs. In this context active cooperation with Estonian embassies and representatives in foreign countries will be essential.

c) Actions related to introducing Estonian food and food culture to children and youngsters:
Educational programs, which focus on life in the countryside, food production, Estonian food culture and traditions, are planned. Visits to farms and food processors, different competitions and workshops guided by chefs, are some of the events that will tell the story of Estonian food and introduce the possibilities of cooking in a traditional as well as in a modern way.

The activities are related to food culture and improving the image of Estonian food. Some of the substantial activities in 2015 included the following:

1. Creating the webpage www.estonianfood.eu as a part of improving the image of Estonian food.
2. Participation in the international fair Green Week.
3. Organizing Estonian Food month.

In September 2015, Estonian Food Month was celebrated for the first time. It is a time when crops are ripening in Estonian fields, gardens and forests. This abundance and variety was celebrated across Estonia in large and small cities and towns with food festivals and fairs where good Estonian food took centre stage. Estonian Food Month was also celebrated in restaurants. Several top chefs in Estonia selected their favorites from local seasonal raw produce and made a truly exciting dish served only in the course of the Estonian Food Month. Estonian Food month will be also held in 2016.

The program is financed from the budget of the Ministry of Rural Affairs. The Ministry is also responsible for planning and implementing the program.

2.3.5. Participation in EU-funded promotional schemes.

A Milk promotion program was launched in 2015 under the EU promotional scheme. The total budget for the three-year program is EUR 700 000 and the implementing body is the Chamber of Agriculture and Commerce. The program is targeted at the EU-internal market. This is the first time Estonia is participating in the scheme.

Description of the program.

Objective(s): 1. To improve the image of milk and milk products, especially among young people as future adult consumers.

2. To encourage people to consume milk and milk products every day (increasing consumption frequency), especially among young people.

3. To increase (fresh) milk and milk product consumption (increasing consumption quantity), especially among young people.

Strategy**:**

The central message of the campaign is to eat and drink milk and milk products every day. This message will be used for children and young people as well for a wider audience. The program messages give objective information about milk and different milk products and their nutritional value on the basis of recommendations for a balanced diet. The duration of the program will be 36 months, which this longer program more likely to ensure continuity and impact. Measures are targeted mainly at young people as future adult consumers using appropriate channels to reach target groups.

Target groups**:** Consumers in general, focusing in particular on children aged 5 to 15.

Main target groups:

1. Children in educational establishments
2. School canteens
3. Households (especially women of different age groups)

Themes**:**

1. Consumption of (fresh) milk and milk products as a basis for a healthy diet
2. Eat and drink milk and milk products every day

Aspects covered**:** quality, nutrition aspects, health aspects, organic products.

Messages to be conveyed:

1) Eat and drink milk and milk products every day;
2) Milk and milk products are natural, they are an important part of a healthy diet, suited to modern living and are enjoyable;
3) Milk and milk products have specific nutritional value and are especially beneficial for children;
4) There is a large variety of milk products suitable for different consumers in different consumption situations;
5) Low-fat choices of milk and milk products are available and are more appropriate for certain consumers.

The messages are positive and take into account the specific nature of consumption in Estonia. The main messages will be consistent throughout the entire program so as to convince consumers of the benefits of regular consumption of milk and milk products.

3. CONCLUSION AND RECOMMENDATIONS

1. Estonia lacks a general national economic strategy and a general agricultural strategy. The existing strategic documents of the agricultural sector are focused on the implementation of the CAP in Estonia. "Long Term Strategy for Sustainable Development of the Agricultural Sector" 1997, Tartu, created with the help of FAO, was only noted by the government.

2. In Estonia there is no separate strategic export promotion strategy but the export of goods and services is mentioned as a priority in almost all strategic documents and development programs, including the Dairy Strategy Document and the Rural Development Plan.

3. Due to the small size of the Estonian economy exports play an important role in its development. Therefore, different measures and support schemes have been implemented

since independence to develop and increase exports. Corresponding institutions have been created to give support to entrepreneurs.

4. Strategies should be based on a scientific assessment of the initial situation and prospects. An overview conducted by the German Development Institute (Brandt and others) assessed the export potential of the dairy sector to be high and recommended applying for a milk quota of at-least a million tonnes when joining the EU. The same production goal was also set by the dairy strategy accepted in 2014. In both cases a substantial amount to be exported is an essential part of the vision.

5. Dairy exports have been relatively important among all agricultural exports because of high self-supply level and favorable milk producing conditions in Estonia. Therefore, there has been a greater focus on the development of exports in the dairy sector, which has used existing support schemes more than other sectors.

6. In the process of export development it is incredibly important to gain access to important markets and to comply with their requirements. State institutions also hold a vital role in the process of accessing new markets, especially in the areas of food control and compliance with food safety standards.

7. Estonia had its first experiences in this area during the 1990s when a free trade agreement was signed with the EU. In the process of accession a few years later the importance of FTA with EU was proved even more. Free Trade Agreements (first of all with EU) and the EU accession process highlighted implementation of export strategies and a range of tactical measures boosted dairy exports.

8. Despite Estonia being an EU member state, a multi-step approval process needs to be passed before entering other new markets like China, Japan or Indonesia. In addition to this, promotional activities for the country and the product are also needed. So the role and reputation of the state during this process is very important. Equally important are support measures to entrepreneurs in organizing market research and promotion.

9. For successful exports and generally for the smooth development of the sector, the creation of proper legislative and institutional frameworks guaranteed with proper financing is essential.

10. The export capacity of a country should be based on a comparative advantage, which presupposes suitable natural conditions and long traditions including know-how and suitable production facilities.

11. The export of agricultural products is a competition. In an environment where the majority of countries support their producers, a lack of support or the absence of support will leave producers in an unequal and very difficult position.

12. The main role of the state in the development of exports is creating a judicial framework that allows the development of enterprises and commerce. When developing international trade relations the image of the state as a trustworthy partner is important and the building blocks of the export of agricultural products and food are the food safety control system that follows international requirements and the standards that are employed in production.

13. One of the conditions of successful exports is a dialogue between producers and the state and state support to the producers by implementing measures that support export is important.

REFERENCES

1. Agriculture and Rural Development, overviews 1994-1998
2. Estonian Institute of Economic Research. 10 years of Estonian Agricultural and Food Market, 2006.
3. Hussar, K. The Efficiency of the Market Development Support Scheme on Promoting Agricultural and Processed Agricultural Products: the Case of Dairy and Fruit Juice Promotional Campaigns, MA thesis, Tallinn, 2009.
4. Lubi, L. Promotion of agricultural products and foodstuff and use of state aid for that purposes in Estonia in a light of forthcoming accession to the European Union. MBA thesis, Tartu, 2004.
5. Majandusülevaade, Eesti Vabariigi Majandusministeerium, 1993-1994, lk 46-61.
6. **Saron, T.** The Impact of Technical Measures on Estonian Dairy and Meat Industry. MBA thesis, Tartu, 2002.
7. **Saron, T.** Processing and consumption of agricultural products. Technological status of enterprises. Agriculture and Rural Development, overwiev 1998, p. 50-58.
8. **Saron, T.** Food of animal origin. Preaperation for the accession to the EU. Agriculture and Rural life. 1998, Tallinn, p. 22.
9. **Saron, T.** From Farm to Fork. European experience in introduction of implementation and enforcement of the Veterinary and Food Safety Acquis, 2005, Sofia, p. 32-56.
10. **Saron, T. Hein, P., Maadvere, E**., Overwiev of the Economic and technological situation of the Food Industry Sector. Agriculture and Rural Development, overwiev 1999, Tallinn, p. 55-72.
11. **Saron, T.**, **Hein, P., Org, L., Schank, A.** Food Industry. Agriculture and Rural Development, overwiev 2000/2001, Tallinn, p.57-84.
12. **Saron, T.** Food Industry. General situation in food industry. Agriculture and Rural Development, overwiev 2002/2003, Tallinn, p. 43-48.
13. Ülevaade Eesti põllumajanduspoliitikast aastatel 1986-1996, OECD, Pariis, 1996, 249 lk.

14. www.stat.ee
15. www.toiduliit.ee
16. www.epkk.ee
17. www.agri.ee
18. www.kredex.ee
19. www.eas.ee

ANNEX 1

Quality mark statute

The rights for using the Tunnustatud Eesti Maitse mark of quality and origin (henceforth the swallow mark) are given to enterprises that are registered in the commercial register to mark high quality products that are produced from Estonian raw materials. The swallow mark is given to products that go through inspection of the origins of the raw materials and laboratory and sensory evaluation. The raw materials used in the production must be 100 percent of Estonian origin.

The rights for using the Tunnustatud Maitse mark of quality and origin (henceforth the clover mark) are given to enterprises that are registered in the commercial register to mark high quality products. The clover mark is given to products that go through laboratory and sensory evaluation. The raw materials do not have to be domestic. The mark can be applied to by all European Union enterprises. The evaluation takes place in the following product groups: meat-, egg-, dairy-, fish-, bakery-, grain-, vegetable- and pastry products, sauces, honey, preservatives, ready meals, infant- and baby-foods, soft drinks and alcoholic drinks.

In order to use the mark the Estonian Chamber of Agriculture and Commerce (henceforth ECAC) will sign a licensing contract with the enterprise, which will be valid until the 31st of September next year. During this time the ECAC will conduct random checks of the quality and origin of the raw materials for products that bear the quality mark. After the licensing contract expires it is possible extend the contract, given that during the last period of the contract the products had the required level of quality. When extending the contract a license fee must be paid by the enterprise and the size of the fee is determined by the board of ECAC.

Applying for the mark

The use of the marks can be applied to by any enterprise that is registered in the commercial register and in the case of the swallow mark prove the origin of their raw materials. The clover mark does not need proof of the origin of the raw materials.

The procedure for applying

In order to apply for a mark the applicant must present the following documents to the ECAC:

- an application using a blank provided by the ECAC (each product must have a separate application)
- a copy of a valid physico-chemical and microbiological laboratory analysis (the analyses must be conducted in an accredited or approved laboratories and must not be older than 1 month)
- documents to prove the domestic origin of the product

The ECAC takes responsibility for keeping the documents confidential. After the documents are submitted the ECAC will sign a contract with the applicant for the participation in the evaluations.

The quality manager of the ECAC will check the origin of the raw materials (in the case of the swallow mark) and quality experts will conduct sensory evaluations of the product. The enterprise is notified of the results of the evaluation. For marking products that successfully pass the evaluations the ECAC will sign a licensing contract with the enterprise and give out a certificate on the right of the use of the mark. The mark will be valid from the year of evaluation until the end of the next year. If during that time in follow-up evaluations the product has met the requirements that are needed to bear the mark, then the enterprise has an opportunity to extend the licensing contract. The licensing fee is paid once for every calendar year.

Evaluation

Evaluation is conducted in the following product groups: meat-, egg-, dairy-, fish-, bakery-, grain-, vegetable- and pastry products, sauces, honey, soft drinks and alcoholic drinks.

In the case of the swallow mark the origin of the raw materials are checked differently with each product group. Quality evaluation is done in the same way for both the quality marks and all product groups.

In the first stage of evaluation ECAC will look through all the physico-chemical and microbiological laboratory results and checks if they are up to the standards established in Estonia, or if they have not been established, up to technical specifications. In case of the swallow mark the accuracy of the documents proving the origin of the raw materials is checked. All products that are up to specifications can take part in sensory evaluation. The day before evaluation with experts ECAC workers will buy all of the products from retail

chains recommended by the enterprises. To ensure anonymity the meat products are purchased by the dairy expert and the dairy is purchased by the pastry expert etc.

The evaluation takes place twice a year. The products are given a licence to carry the mark until the 31st of December next year.

Checking the origin of the raw materials

In order to get the swallow mark the raw materials used in the production must be 100 percent of Estonian origin. The enterprise must have an internal system to check for this. Documents that the enterprise uses to prove that the raw materials are domestic:

…

2. Milk products

The manufacturer must submit the following documents to prove that the raw materials are domestic:

- veterinary certificate issued by a certified veterinarian or supervisory officer;
- a way-bill from which the origin of the product can be determined from. In addition the enterprise will sign a confirmation that they are using domestic raw materials and the consignment documents.

…

Evaluation the sensory quality of the products

Both the products that are applying for the swallow mark and the clover mark are evaluated.

1. The products take part on the evaluations anonymously, which means that the experts do not know who the manufacturer of the product they are evaluating is. All of the labels or packaging that refer to the manufacturer are either removed or covered up or the product is unpackaged before the evaluation. During the evaluation the ECAC guarantees the anonymity of the products with a scrambling system that has been developed for this purpose.

2. During the sensory evaluation the main focus is on the taste. In addition to taste, looks, consistency and smell are also evaluated. The evaluation is conducted via evaluation sheets and the product must score at-least 4.0 to qualify for a mark.

3. After the evaluation the ECAC workers will descramble the product codes and draw up summaries of the evaluations. Products that had positive results are given a certificate which allows them to use the quality mark. Products that did not get a positive result are not published by ECAC, but does inform the enterprises of the results and reasons behind the negative result.

The expert committee

Each product group has a different expert committee, which has 5-10 members. The experts are chosen from different scientific establishments, laboratories, the food industry, professional associations etc. The experts are chosen based on specific criteria. All of the experts are specialists in their own fields and are active in the food sector. The ECAC conducts continuous expert training and further education.

Requirements for the experts that carry out the sensory evaluation:

- A specialist, who knows his field, has a professional education;
- Skills in sensory evaluation, for example works in quality assurance;
- Active in their own field, knows the current problems in their field and is familiar with the technology;
- A neutral disposition to the products being evaluated;
- Cooperative, suitable for team work;
- People who are ill cannot take part in the sensory evaluations;
- The expert must be well rested;
- Hunger, the feeling of satiety and thirst influence the actions of the expert;
- Using cosmetics that has an odour is not allowed during the evaluation day;
- The experts must refine from smoking during the evaluation day.

Follow-up evaluations

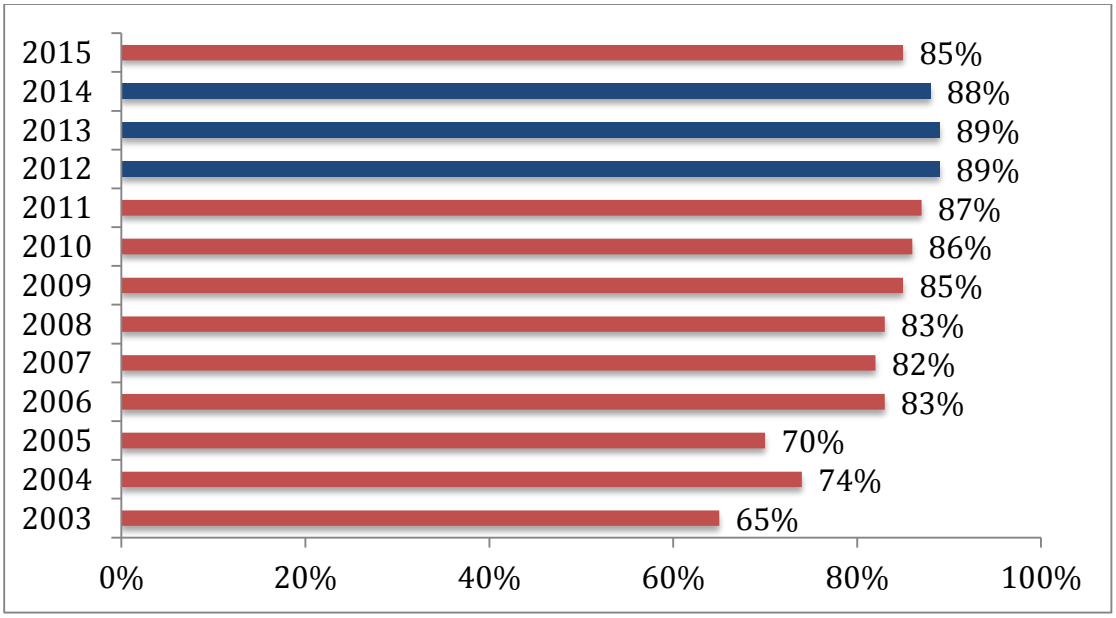
- The raw materials of the product are checked at least once a year, in special cases more often if there are complaints. The follow-up evaluation is conducted by ECAC representatives. Based on the licensing contract signed by the ECAC and the enterprise, the enterprise must allow ECAC representatives access to documents that are required (i.e. the documents that have to be submitted during the application process when applying for a quality mark).

- The sensory follow-up evaluation is conducted in compliance with the sensory assessment procedures established in the statute.
- The enterprise is not notified of the follow-up evaluation. The enterprise is notified of the results of the follow-up in writing.
- After the product has failed the follow-up evaluation twice, the product loses its right to bear the quality mark.

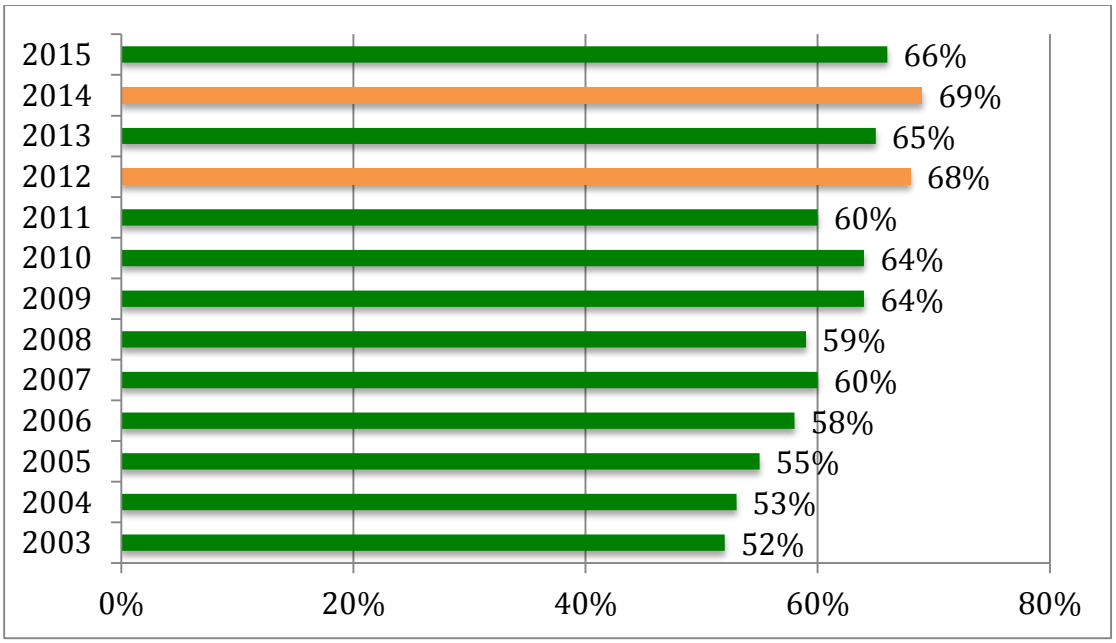
ANNEX 2 Familiarity of the quality labels.

Perception of Swallow-label,

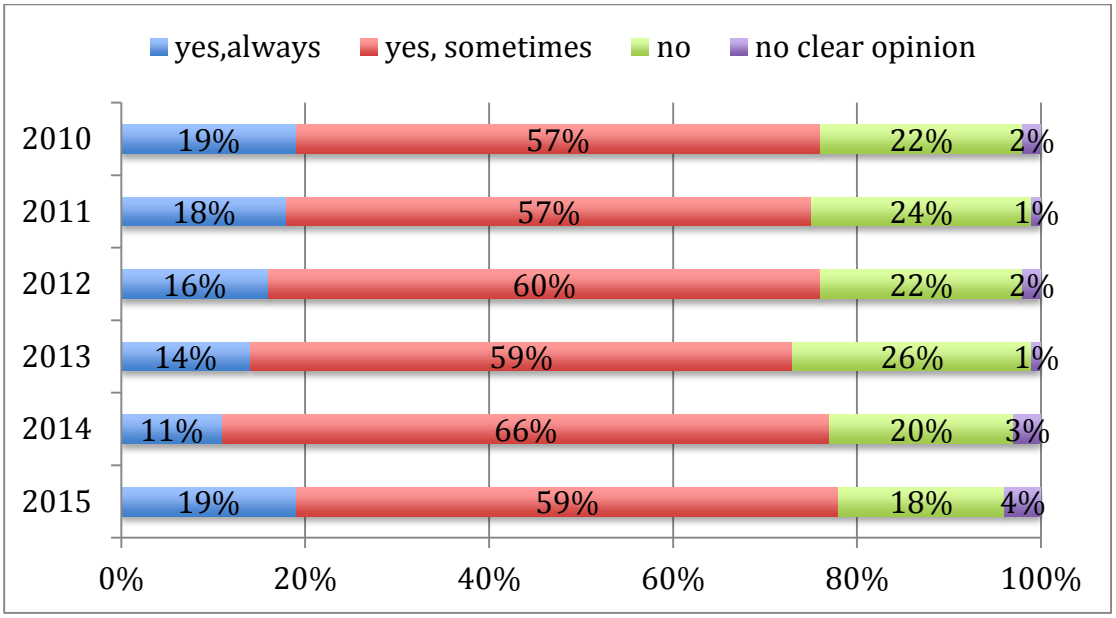
source TNS Emor, % respondents



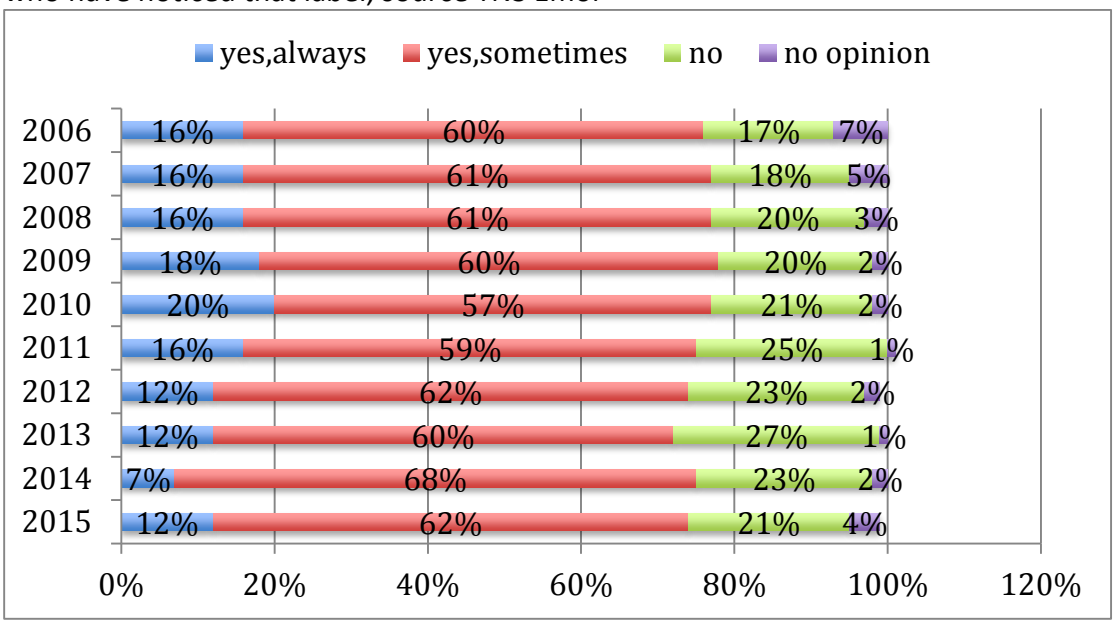
Perception of clover-label,
source TNS Emor , % respondents



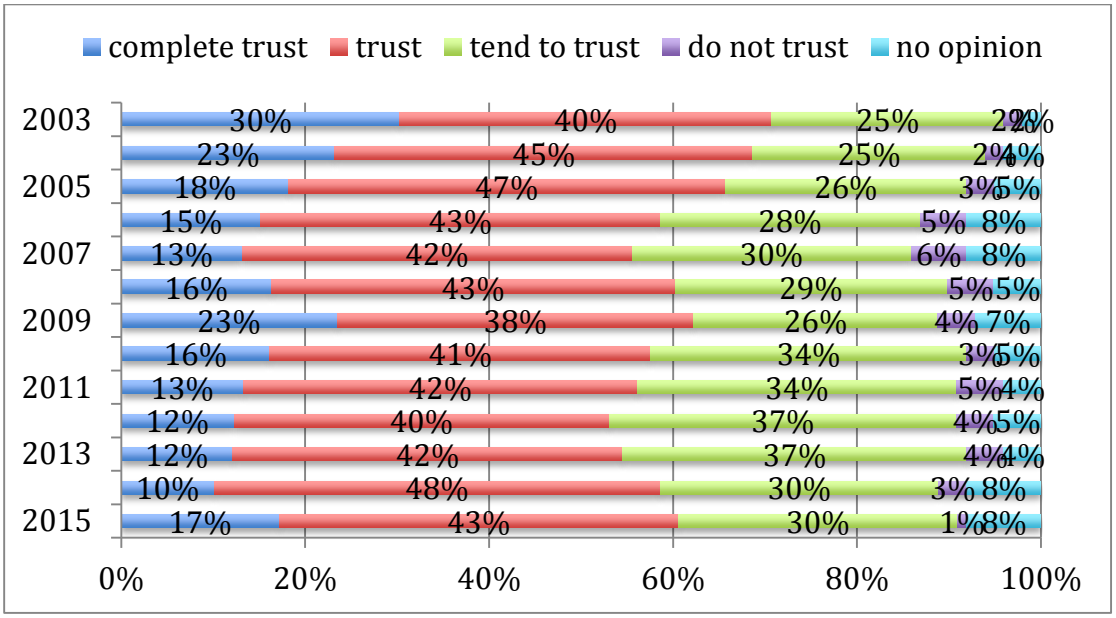
Preference of swallow-label,
% of respondents
who have noticed that label, source TNS Emor



Preference of clover-label,
% of respondents
who have noticed that label, source TNS Emor



Reliabilty of quality labels (swallow or clover), % of respondents who have noticed the labels, source TNS Emor



Ministry of Agriculture

Estonian dairy strategy

2012-2020

Tallinn 2012

Short summary

1. The EU new CAP will soon come into force, milk quotas will expire, the WTO is constantly liberalizing world trade. Those Member States for which dairy production is important (e.g. IRE, NL) attempt to plan strategically how to face the coming changes and to use the concurrent opportunities for dairy development.
2. For Estonia, dairy production is important. Every third Euro of agricultural income comes from milk. Every third Euro reaching rural area through agriculture comes from milk.
3. Estonia has favourable preconditions for milk production, there is demand for Estonian milk products on nearby markets. The strategic goal is to convert those preconditions into moderate growth, adding a third to the present production.
4. Milk production enables to maintain human settlement on a big part of Estonian territory, the small-scale industry which has found its own niche could (also by organic products) bring people to the country and take the products directly to consumers by means of short supply chains.
5. Only competitive milk production and processing can survive. This means scientific innovations in cooperation with agricultural research in the fields of feeding, animal breeding, food technology, product development and economy.
6. Joint activity and vertical cooperation are important both for small- and large-scale production, in order to balance negotiation power between the different links of the chain and to improve market access.
7. Better than until now Estonia should use the opportunity to increase product value. Higher value added provides additional income both in export and on domestic market, where the more active dialogue with consumers shows the way to product development, which reaches its climax in functional products.
8. Updated production with new animal housing and milking methods gives rise to new problems which should be observed very closely, increase in milk production requires high cattle herd reproduction rates.
9. The measures used so far which were dedesigned in view of the whole chain have justified themselves.
10. The problem analysis and purpose setting of the strategy an be used as an input in the new RDP 2014–2020.
11. The value added of strategic planning is the key to a more resultative dialogue between all the participants in milk production chain. The dialogue should continue during strategy implementation. Better understanding of the role of all participants in the promotion of milk production should contribute to the implementation of the strategy.
12. The strategy concentrated on some twenty or thirty pages includes situation analysis, problem notification, purpose setting and the table of objective-

targeted measures. The annex comprises a voluminous analysis produced by the Estonian University of Life Sciences and comparative data of other milk producing countries.

Contents

Used abbreviations and definitions

EAS – Enterprise Estonia

EC – European Commission

EKI – Estonian Institute of Economic Research

EU – European Union

EMÜ – Estonian University of Life Sciences

ETF – Estonian Science Foundation

HTM – Ministry of Education and Research

Sustainable food production – competitive production and processing of agricultural products directed by market economy, helping to improve living conditions and employment opportunities in rural areas, to follow environmental sustainability and to maintain natural habitats, biological diversity and landscapes.

Value added products, consumer products – milk products directed at final consumer

Value added – an amount added to the value of a product in any production or general turnover process, reflecting in increase in the price of the product and covering profit and all labour and capital costs in the turnover link

RDP – Estonian Rural Development Plan 2007–2013. The RDP measures:

1. 1.1 – Training and information activities
2. 1.2 – Setting up of young agricultural producers
3. 1.3 – Support for advisory system and services
4. 1.4.1 – Investments into the development of micro agricultural holdings
5. 1.4.2 – Investments in livestock buildings
6. 1.6.1 – Processing of agricultural and non-wood forest products
7. 1.6.2 – Adaptation of the dairy sector and organic farming to new challenges and the promotion of the joint processing of agricultural products
8. 1.6.3 – Promotion of the joint marketing of agricultural products
9. 1.7.1 – Cooperation in the development of new products, processes and technologies in the sectors of agriculture, food and forestry
10. 1.7.3 – Communication and promotion activities related to the products produced under food quality plans
11. 1.8 – Infrastructure of agriculture and forest management
12. 1.9 – Setting up and development of producer groups
13. 2.1 – Support for less-favoured areas
14. 2.2 – Natura 2000 support for agricultural land
15. 2.3 – Agri-environmental support
16. 2.4 – Animal welfare: support for animal grazing
17. 3.1 – Diversification of the rural economy
18. LEADER-measure – connections between different rural economy development activities

MKM – Ministry of Economic Affairs and Communications

Milk Package – motions to amend Regulation No 1234/2007, proceeding from the conclusions of a special High Level Group set up in 2009

PMAN – Agriculture and Rural Development Council

ARIB – Agricultural Registers and Information Board

SA – Statistics Estonia

SPS Agreement – the WTO Agreement on the Application of Sanitary and Phytosanitary Measures

R&D – research and development

Research and development – systematic basic research, applied research or experiments and development, of which the objective is to improve knowledge and to use this knowledge for the development of new applications (both new and improved products and processes)

Product development – acquisition, linking, designing and use of the existing scientific, technological, business and other relevent knowledge and skills with a view to make plans, arrangements or projects for new, changed or improved products, processes or services

TBT Agreement – the WTO Agreement on Technical Barriers to Trade

SME – small and medium-sized enterprises

VM – Ministry of Foreign Affairs

VTA – Veterinary and Food Board

CAP – Common Agricultural Policy

1. Objective of the strategy

The objective of Estonian dairy strategy is to increase the volume of milk production and processing and to ensure sustainability by the year 2020. To this end, present economic status of Estonian undertakings operating in the field of milk production and processing will be mapped, the further possible development trends of the dairy sector found out, the vision for the year 2020 put in words and the measures necessary to achieve the strategic objectives described.

2. Vision

Estonian sustainable and competitive dairy sector is oriented toward the production of high value added milk products meeting market demand (incl. increasing volume of organic products) and toward export, supported by vertical and horizontal cooperation.

In 2020, Estonian dairy sector is oriented toward joint activity, creates high value added (incl. health promoting biotechnological products), a big part of those products is exported and the volume of farm dairy and organic products is increasing. Milk production has maintained its priority in the sector of agriculture. Increase in competitiveness, regional and structural balance of production and sustainable production practices concurrent with higher production and processing efficiency ensure the sustainability of the dairy sector. Sector employment is guaranteed and the efficiency of production and processing increases thanks to the application of new technologies and knowledge. The system of in-service training and retraining has been developed and applied in the dairy sector. The educational institutions teaching the specialties needed for agriculture and food industry have high level and are popular among the youth. Crisis backup measures have been developed for crises and epidemic outbreaks.

<u>In vision formulation, the following presumptions about the situation in 2020 were considered:</u>

1. Due to growing global population and changing nutritional habits, demand for milk products will increase on more open global markets and purchasing power and consumption will grow on domestic market.

2. In the EU, there are no restrictions on milk production. The EU and national subsidies (incl. export subsidies) have either expired or substantially decreased, the EU and national system of crisis measures have been developed (incl. an insurance system, preventive and disease-control measures, measures to fight market failures and economic crisis).

3. Climate change exacerbates food production in many regions of the world and to some extent may even begin to influence agricultural production conditions in Estonia.

4. Estonia is moving toward environmentally friendly production (incl. organic production) and growing organic food markets are gaining popularity.

5. In Estonia, urbanisation is losing its attractiveness, some city residents go back to the country, but most of them will not be engaged in agriculture. The number of people directly involved in milk production and processing may still decrease.

6. The EU internal market (incl. Estonia) will still be the most important market. Russia is one of the export markets with the best potential, at the same time export opportunities to markets outside the EU have improved.

7. Balanced and sustainable development of the whole supply chain and not only the continual concentration of the dairy sector is the key to the success of the field of dairy.

3. Short overview of the status of the sector and of milk production and processing problems

Description of the situation (see also Annex 2 Dairy strategy background survey, Estonian University of Life Sciences 2011)

Economic importance

Estonian economy, incl. the sectors of agriculture and food industry, has developed considerably during the period 2001–2011 – it has passed the phases of growth, bubbling, abrupt economic decline and restoration of economic growth. Milk producers and dairy plants have passed all the phases of general economic growth and have been able to maintain their position and even improve it to some extent during the years of economic crisis.

The dairy sector has contributed considerably to Estonia economy. Food industry is still one of the most important branches of processing industry (in 2010, the turnover of food industry made up 14 percent of the total turnover of processing industry), dairy industry is the leading branch of food industry (in 2010, the turnover of dairy industry made up 30 percent of the total turnover of food industry). Considering the fact that 20 years ago twice as much milk was produced as today in Estonia and regarding growing global demand for food, Estonia has potential to increase the production of milk and milk products and to enlarge exports. The dairy sector has an opportunity to raise the total value of production on the one hand relying upon tradition and on the other hand upon its capability to develop both by increase in the volume of production and in the value added to raw material.

The present forecasted increase in the volume of milk production would bring about even bigger economic impact. It can be estimated that in 2012–2020

increase in the volume of milk production by a third will cause an additional need for investment within the range of 200–300 million euros, bringing about the same level of tax revenue.

By the current average milk yield and in order to increase milk production by a third the number of dairy cows must be increased by 33.5 thousand animals, this can bring about the need for max. 67 thousand hectares of agricultural land (presuming that the land quality rating will be the same). Presuming that the average milk yield may increase by up

to 19 percent by the year 2020, we may need only 12.2 thousand additional cows, which would mean that about 25 thousand hectares of additional agricultural land would be required.

We must also be ready for substantial global increase in the price of the feed used to produce milk. This is related to growing global food demand, which can bring about increase in production costs as well as the need for additional agricultural land and for bigger than planned increase in the number of dairy cows.

Producers

The number of enterprises engaged in milk production has decreased rapidly in Estonia. During 2004–2011, the number of milk quota owners decreased by 54.6 percent. At the same time, if in 2004 an Estonian milk quota owner had 244.8 tons of milk quota on an average, the respective number was 647.2 tons in 2011. In Estonia, concentration of dairy industry (partly due to historical reasons) is higher than in the other Baltic states and Finland. 84.5 percent of milk is produced by only 20 percent of producers and 80 percent of producers produce only 15.5 percent of milk. Regionally, milk production has mainly concentrated to Central and Eastern Estonia (figure 1). And as a rule, growth of production is bigger in those regions where it was bigger earlier. Production concentration follows the logic of economic conditions.

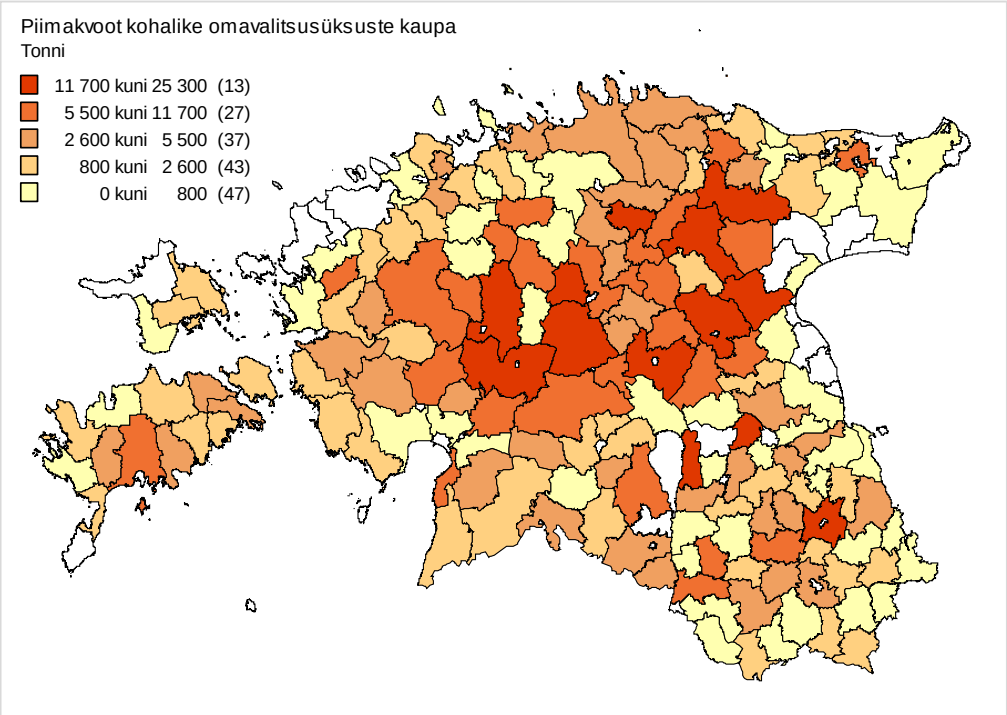


Figure 1. Milk quotas by local governments as of 01.04.2011.
Source: drawn up on the basis of ARIB data (2011).

On the basis of the trends of the last ten years we can distinguish between two viable milk producers' size groups in Estonia – smaller producers with the herds of 51–100 dairy cows and bigger producers with the herds of more than 300 head of cattle (figure 2). In all other size groups, the number of herds and the quantity of produced milk has continually decreased. The herds with more than 300 head of cattle have a bit more than a half of Estonian dairy cows but they produce about two thirds of total milk. As of 2010, a Finnish farmer with 30 dairy cows was regarded as a viable milk producer, in Latvia and Lithuania cows were concentrated into the herds of 10 and more head of cattle. Thus, Estonian milk producers have better advantages to achieve scale effect.

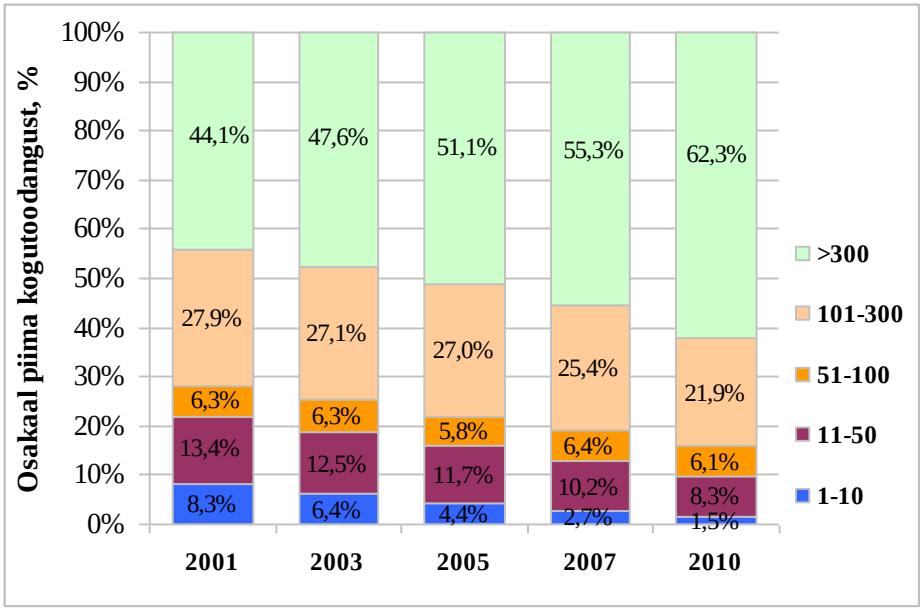


Figure 2. Share of herds of different size on the basis of milk production in Estonia during 2001–2010.
Source: SA.

On the background of the general trend of decrease in the number of dairy herds, milk production can only increase through the enlargement of the existing milk producers and through increase in the productivity of dairy cows. The objective of the strategy to increase milk production by a third by the year 2020, compared to the year 2011, can be achieved by increase in the number of cows by 12.2 thousand animals or 12.6 percent and by increase in the average productivity by 1.36 tons or 19.1 percent.

In Estonia, the average value of assets owned by milk producers per one dairy cow in 2009 was 6 400 euros on an average. During the last ten years, Estonian milk producers have invested into livestock buildings, farm equipment and cultivation technique. At the end of 2011, dairy sheds were reconstructed and built in 182 production units. In all, those cowsheds have about 53 000 places, of which about 1 670 places or 3.2 percent have not been occupied. Thus, the new and reconstructed cowsheds do not have considerable reserve for the enlargement of the dairy herd.The remaining bigger cowsheds originate from the 1960ies up to the 1980ies. Besides, it has to be considered that mainly dairy sheds have been built and reconstructed. The number of new or reconstructed young cattle sheds is considerably smaller.

In enterprises with reconstructed or new dairy sheds the productivity of cows is above average. Although those enterprises own 52.8 percent of dairy cows, in 2011 their total milk quota quantity made up 63.8 percent of the distributed milk quota. Thus a bit more than a half of dairy cows are kept in new or reconstructed sheds and those cows produce about two thirds of Estonian milk production.

Considering that 53 thousand dairy cow places have been reconstructed, in case of the present average milk yield 77.3 thousand dairy cow places should be built or reconstructed in order to increase milk production by a third. If the productivity of cows will increase by up to 19 percent by the year 2020, 56

thousand dairy cow places should be built or reconstructed in order to achieve the same volume of production.

Therefore, additional investments into buildings, machinery and equipment within the range of ca 168 million euros (in case of 56 thousand additional places) to ca 232 million euros (in case of 77.3 thousand additional places) would be needed. In addition to the above mentioned costs, investment should also be made into animals which in case of breeding stock would be ca 14 to 37 million euros.

Transition to new technology has contributed to increase in productivity and enhanced milk producers' competitiveness. At the same time, new technology has its disadvantages:

- Producers' debt load is relatively big. In 2010, liabilities made up 54.1 per cent of bigger producers' assets and debt coefficient exceeded the critical level in case of 15.7 per cent of bigger milk producers. Therefore, they are vulnerable to price volatility. Besides, price volatility has increased on the world market in the last years.
- In ten years, the average age of the cows removed has decreased by 1.3 years. This means that the average number of lactations and progeny per dairy cow has also decreased. Therefore, the importance of costs related to herd reproduction has increased and this can increase the cost price of milk and weaken the competitiveness of Estonian milk producers.
- In 2001–2010, the importance of extremities diseases, traumas and metabolism diseases as the reason for the removal of animals increased.

"Food crisis" and the concurrent fall in milk purchase prices had their impact both on the milk production of Estonia and other countries. The relatively smallest decrease in milk production could be observed in Lithuania in 2007–2010. This can be one of the reasons why Lithuanian dairy plants are more interested in the import of raw milk from other countries. About 30 percent fall in milk purchase prices in 2009 was followed by ca 5 percent fall in milk production volume. In 2010 and 2011, market was favourable to milk production which has been raised to the level of 2008.

The number of dairy cows which has been decreasing in Estonia over the last 20 years has constantly been 95 500–96 700 in the last three years (figure 3). The present size of dairy herd will enable certain increase in milk production, provided that the average milk yield will also increase.

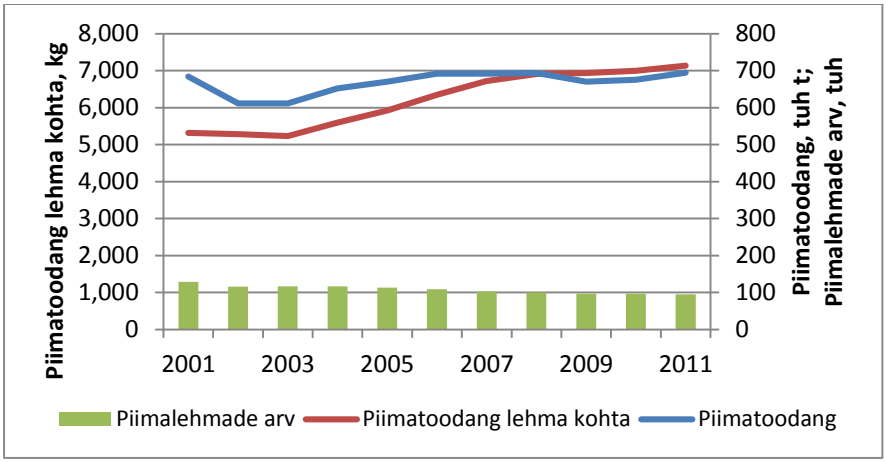


Figure 3. Number of dairy cows, milk yield per cow and milk production in Estonia in 2001–2011.
Source: Eurostat (2012).

Thanks to increase in the average milk yield, milk production has not changed much in Estonia in the last ten years. In 2001–2010, milk yield increased by 36.1 percent in Estonia. Aiming at rapid growth in the average milk production is one of the reasons why the average dry matter content of milk has decreased in Estonia and is smaller, compared to the other Baltic states and Finland (figure 4). For dairy plants, it brings about bigger transportation costs per 1 kg of dry matter and bigger raw milk and equipment handling costs to produce 1 kg of finished products. 675 400 tons of milk produced in Estonia contained 49 800 tons of dry matter (7.37 percent) in 2010. If in Estonia the average dry matter content of milk had been the same as in Finland (7.74 percent), 643 100 tons of milk (4.8 percent less than the actual milk production in 2010) would have been sufficient.

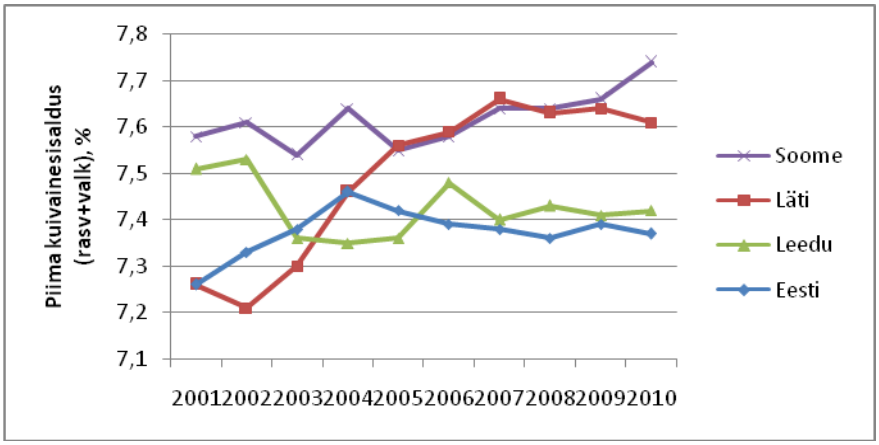


Figure 4. Average dry matter content of milk in the Baltic states and in Finland in 2001–2010.
Source: Eurostat (2011).

In 2010, milk quota owners included 92 organic producers and the total milk quota in their ownership made up 2.4 percent of the distributed milk quotas. Nevertheless, in Estonia organic milk processing has not caught up with growth in organic milk production volume and a big part of organic milk is processed with regular milk. In 2009, about 20 percent of organic milk reached consumer as organic milk product. In 2009, the consumption of organic milk and milk products made up 0.5 percent of the total consumption of milk and milk

products. Mainly small milk handlers are engaged in the production of organic dairy products.

In Estonia, milk production costs per 1 kg of produced milk and per 1kg of milk dry matter are by 6.7 percent and by 9.9 percent higher than in Latvia. Compared to the respective figures in Lithuania, costs per 1 kg of milk dry matter are by 53.9 percent higher in Estonia but by 38.7 percent lower than in Finland. Compared to the other Baltic states, wages costs included in milk production costs are considerably higher in Estonia (figure 5). The difference has been caused by the different structure of milk producers. In Estonia, the share of the so called larger mainly paid labour-based producers is bigger. In the other Baltic states and in Finland, we mainly deal with family farms where farmers are usually not in the habit of paying themselves and the profit must also cover labour costs.

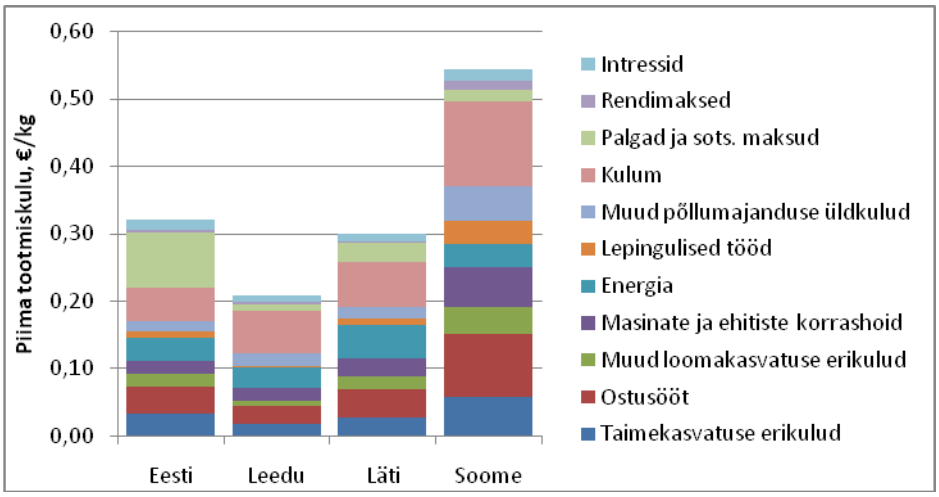


Figure 5. Milk production costs in the Baltic states and in Finland in 2009, euros/kg.
Source: FADN PublicDatabase (2011).

In the Baltic states and in Finland, the seasonality of milk production decreased in 2001–2010. In Finland it was the lowest in 2001 (1.17) and stayed low in 2010 (1.13). In the last ten years, the seasonality indicator of Estonian milk production has approached the Finnish level.

In addition to traditional milk production, goat breeding, incl. goat milk production has indicated positive development. Both the number of goat keepers and goats has grown and as of 2011 about 500 goat breeders owned 1431 milk goats in Estonia. Grassland hectare-based support for goat breeding (considering stocking density) can be a favourable reason of growth in the number of goats. Compared to cow keeping, goat breeding suits better for small-scale production and provides the cow keepers with smaller herds with a good alternative. Although so far goat milk has mostly been produced for families' own consumption, a growing trend to produce goat milk products (milk, cheese, yoghurt, etc.) for sale has arisen. One small organic goat milk processing dairy

has been approved by the Veterinary and Food Board. Production has been growing from year to year and the improved processing skills give us reason for thinking that goat breeding will become more market oriented and more products will reach the consumer.

Processors

Regardless of the fact that milk production has been relatively stable, purchasing and processing of milk has increased. In Estonia, the purchase of milk increased by 45.1 percent in 2001–2010, by 62.4 percent in Latvia and by 30.1 percent in Lithuania. In Finland, the quantity of purchased milk has decreased by 6.9 percent (at the same time, milk production decreased by 7.6 percent). Increase in the purchase of milk by the relatively stable milk production indicates that workers' security of payment and their professionality have improved. Dairy cow keeping for own use and direct sale of milk by producers has considerably decreased. This is confirmed by the fact that the number of herds with 1–2 dairy cows has decreased most. By 2010, the share of purchased milk in produced milk grew to 92.0 percent in Estonia, the share of the dairy plants belonging to milk producers' cooperatives and other associations made up 60.2 percent of purchase.

In Estonia, the number of dairy plants has decreased in the last ten years and production has been concentrated. If in 2001 two bigger dairy plants processed 36 percent of purchased milk, by 2011 the share of two bigger plants had grown to 45 percent and the share of four bigger plants to 64 percent.

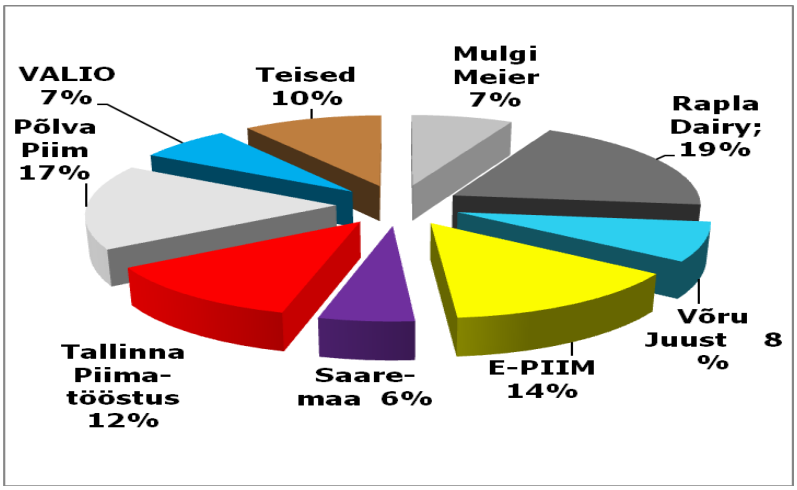


Figure 6. Purchase of raw milk in 2001.
Source: Estonian Dairy Association.

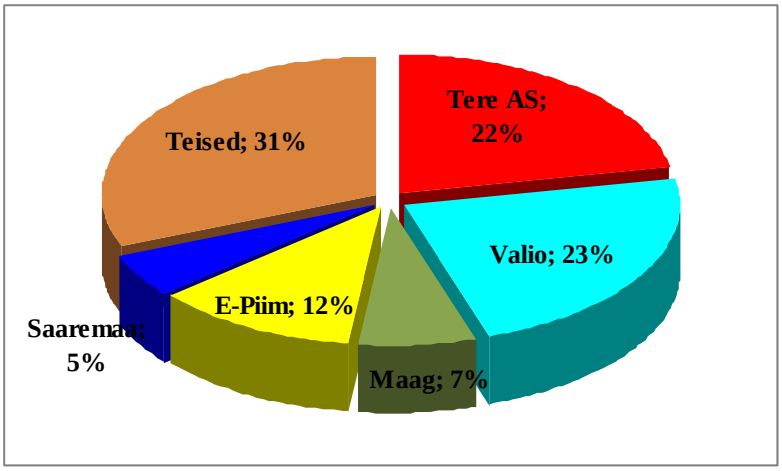


Figure 7. Purchase of raw milk in 2011.
Source: Estonian Dairy Association.

In comparison with Finnish dairy plants, the productivity indicators of the dairy plants of the Baltic states are much more modest. The average turnover of Estonian dairy plants per employee made up only a third of the Finnish respective figure in 2009. The respective indicator of Lithuanian and Latvian dairy plants in their turn was by a bit more than a third lower than the Estonian level. As for the average gross value added per employee, the states were almost at the same level. In 2009, Estonian indicator made up a bit less than a third of the level of Finland, Lithuanian and Latvian indicators made up 76 percent and 61 percent of the level of Estonia. At the same time, in the Baltic states labour productivity is higher than in Finland. If in Finland the value added produced by one employee made up 146.8 percent of personnel costs per employee on an average in 2009, the respective figure was 193.2 percent in Estonia, 199.1 percent in Lithuania and 159.3 percent in Latvia. Thus, in the dairy plants of the Baltic states the so called physical labour productivity is considerably lower than in Finland, but higher, considering the difference of wage levels.

In 2001–2009, the value added of Estonian dairy plants increased by 103.8 percent, the respective figures of Lithuania and Finland were 158.5 percent and 34.1 percent. Estonian, Lithuanian and Finnish dairy plants have also been able to increase the share of value added in product value and the share of the production of milk products in the value added of processing industry.

The low level of productivity indicators also refers to the need to put the results of research into production and processing practice more than done so far. This would enable to make the whole milk production chain more productive and resource saving.

The debt coefficient of Estonian dairy plants is relatively high. In 2006–2009, its value was 0.64–0.66 or a bit lower than the critical 2/3. Thus, the aggregate debt coefficient of dairy plants is somewhat higher than the respective indicator of milk producers. Comparing the net profits of dairy plants and milk producers of the year 2009, when milk product prices and export levels were low, the net profit of dairy plants was 5.6 million euros, but the total net loss of 166 bigger milk producers was 19.3 million euros. In 2010, the net profit of Estonian dairy plants was 4.5 million euros and the aggregate net profit of 166 bigger milk producers was 24.0 million euros.

In the last ten years, Latvia and Lithuania have invested relatively more into the improvement of technological level than Estonia, but Estonian dairy plants in their turn have cut the difference between the technological level of Estonian and Finnish dairy plants. The bigger investment need of Latvia and Lithuania can be justified with the lower initial technological level of their industry, particularly in comparison with Finland where investment need is lower.

Today, Estonian dairy plants use ca 70–80 percent of their total capacity. Estonian dairy plants would be able to process ca 790 000 tons of milk a year. Considering the total milk production, it would mean the production capacity of about 830 000 tons. It can be concluded that for the time being the processing capacity of dairy plants is not an obstacle to the development of milk production in Estonia. At the same time, a big part of the powder equipment used in Estonian dairy plants originates from the years 1968–1996, milk pre-processing and heating equipment from 1995–2005 and technological tanks from the 1970ies. Thus, some equipment and production lines are obsolete and non-effective and should be replaced in order to increase the technological level and competitiveness of dairy plants.

In Estonia, it is difficult to estimate the volume of investments necessary for the processing of the quantity of milk which is by a third bigger than so far. According to estimates, the present processing capacity of dairy plants corresponds to ca 830 000 tons of milk production (considering the 95 percent share of processed milk). Considering that the milk production targeted at in the strategy exceeds the current capacities of dairy plants by 100 000 tons and the average value of the fixed assets of the plants is 212 000 euros per one 000 tons of milk and presuming that for the processing of an additional quantity of milk linear increase in fixed assets will be enough, dairy plants should additionally invest ca 21 million euros by 2020.
At the same time, in 2005–2010, the enterprises engaged in the production of milk products invested into fixed assets 18.3 million euros a year on an average. Thus, the total investment needed to increase processing capacity approximately corresponds to dairy plants' usual investment volume of 14 months. As this estimate is based on the existing data and technology, it can be presumed that considering the need for increase in technological level and productivity the actual additional need for investment is considerably bigger than the calculated 21 million euros in the sector of milk processing. This is confirmed by milk processors' expert estimation according to which the optimum sum to be invested into milk processing is 15 million euros a year.
Within years, the profile of the products of dairy plants has also changed. The production of cheese, consumer products and whey powder has increased. The production of skimmed milk and milk powders and butter has decreased. The share of final products has also decreased, for instance it has been estimated that 30 percent of produced cheese is packaged into small packagings.

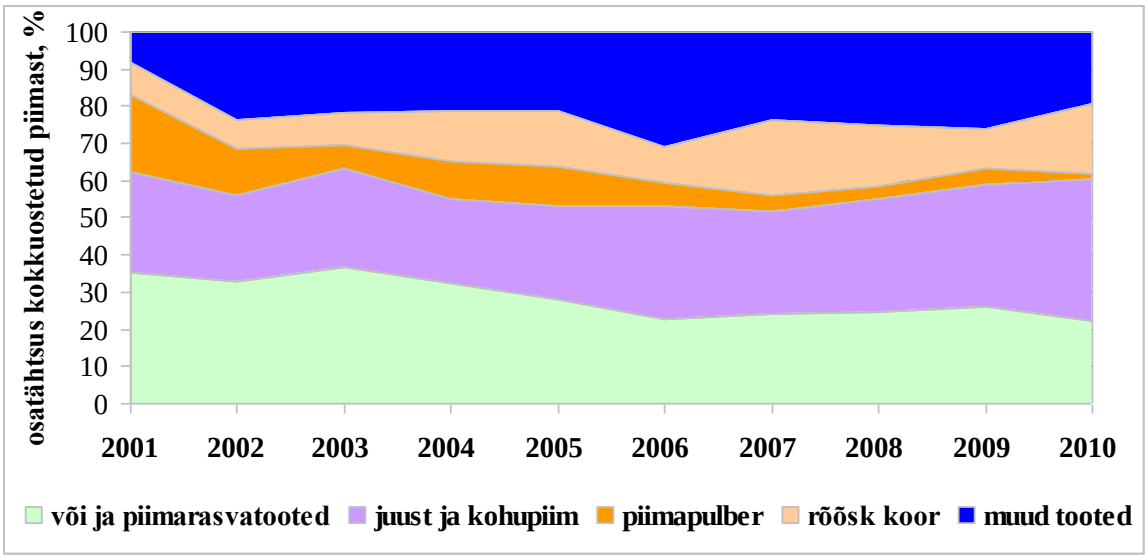


Figure 8. Use of milk in milk products in 2001–2010.
Source: SA.

At the same time, powder and butter prices are volatile and this determines the respective volume of production. In 2011, butter prices were higher than cheese prices and the value added of butter was high.

Export

Estonia is a net exporter of milk products. In the years of more favourable market situation, the net export value of milk products has been about 100 million euros (figure 9). In Estonia, the export volume has continually increased but increase has been even bigger in Lithuania. The raw milk exported from Estonia, upgraded in Lithuania and exported has also contributed to that.

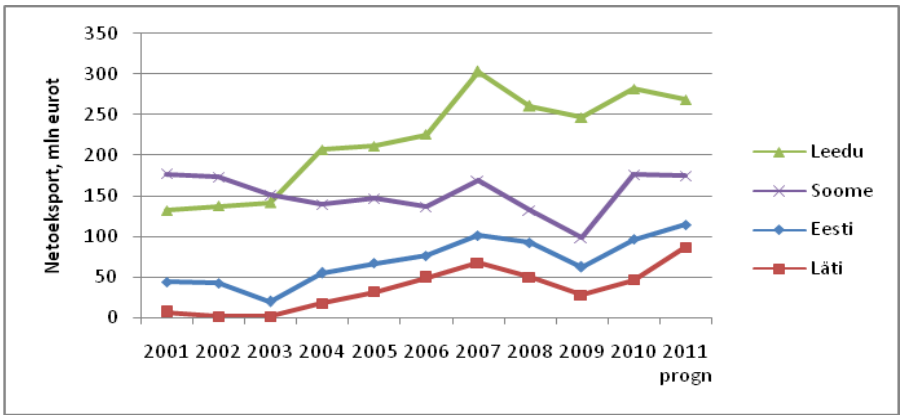


Figure 9. Net export of milk products in the Baltic states and Finland within 2001–2011 (the indicator of 2011 has been forecasted on the basis of the data of 10 months), million euros.
Source: Eurostat (2011).

Figure 10 indicates that against the background of the general negative foreign trade balance for agricultural products the foreign trade balance for milk products remains positive.

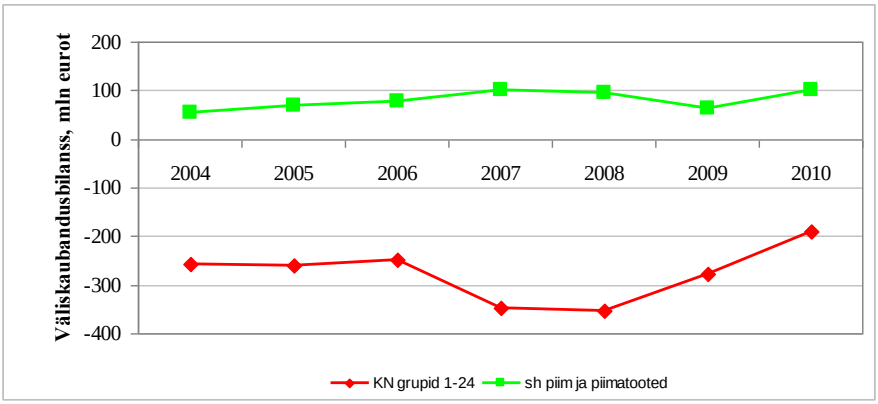


Figure 10. Foreign trade balance for agricultural products (KN groups 1–24) and for milk and milk products, million euros.
Source: SA

In the export structure of Estonian milk products, the share of cheese has grown considerably but the share of powders and butter has decreased (figure 11). The importance of fermented products and whey powder has also increased. In the last years after the extremely low milk purchase prices of the year 2009, export of raw milk to Latvia and Lithuania has grown. To some extent, it has decreased the export of cheese and powders as well as the average processing level and value added of Estonian exported milk products. In the long run, it would be more useful for Estonian economy to add value to Estonian milk on the spot and to export value added products. According to estimates, due to the export of raw milk dairy plants lose 29.4 million euros of additional sales revenue and the export turnover of Estonian milk products is by about 9 million euros lower than it could be.

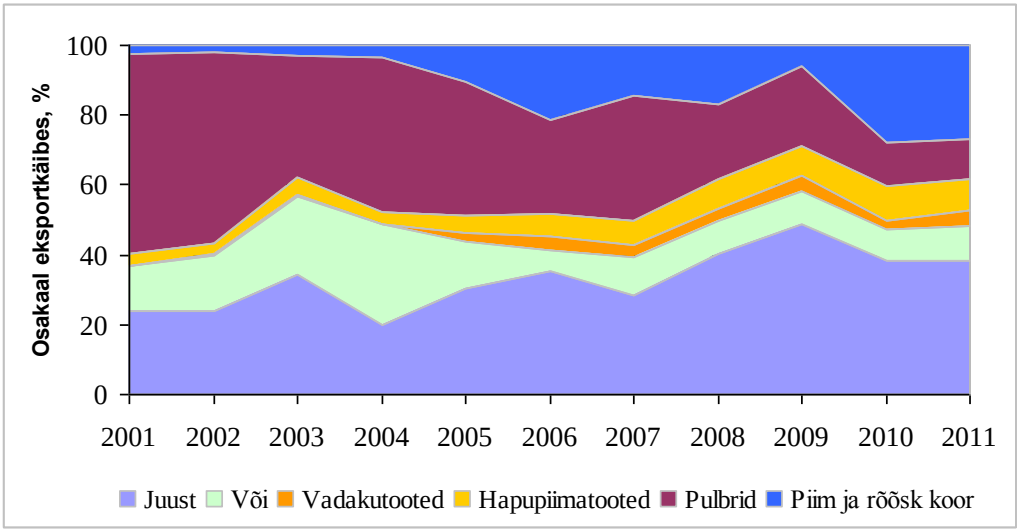


Figure 11. Share of product groups in the export turnover of milk products, percent.
Source: SA.

The export markets of Estonian milk products have considerably changed during 2001–2010 (figure 13). If before the accession to the EU milk products were

mainly exported to the Netherlands and Germany, then after the accession the importance of closer markets (Latvia, Lithuania and Finland) has increased. In the last years, the importance of Russia as an export market for Estonian milk products has also grown considerably. At the same time, the number of target countries has decreased. Russia is the most important target country for the export of Lithuanian and Finnish milk products too but in Lithuania and Finland the number of export target countries is bigger. At the same time, Lithuanian and Finnish export of milk products has been specialised in certain product groups.

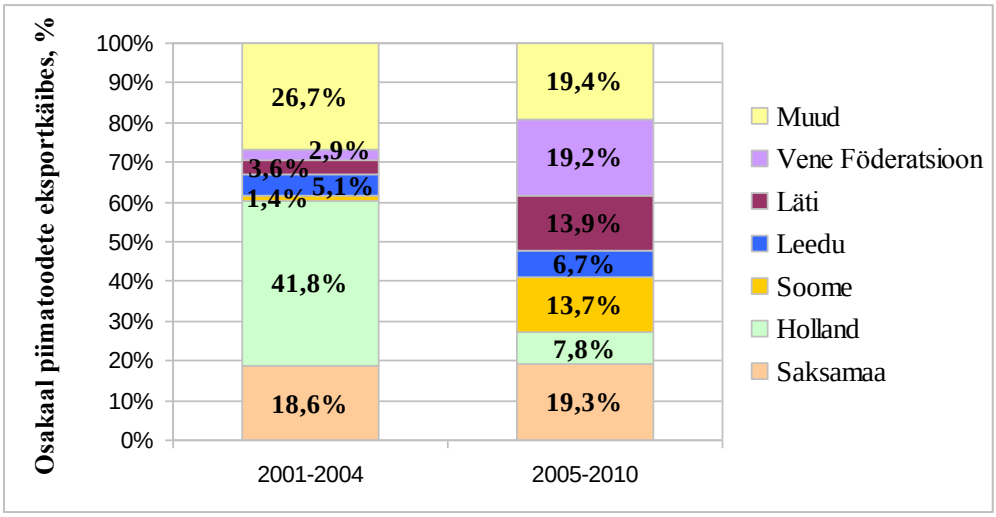


Figure 12. Share of main export markets of Estonian milk products in export turnover before and after the accession to the EU, percent.
Source: SA.

Consumption

In Estonia, the consumption of milk products per capita mainly depends on the general economic situation and consumers' income. During the years of rapid economic growth, consumption increased but decreased during the years of economic recession. Decrease in population size (due to migration) can be one reason for decrease in domestic consumption. Since 2004, the long-term upward trend to prefer domestic products has turned downward. At the same time, preference given to domestic cheese and yoghurts is staying high. It can be presumed that considerable increase in domestic consumption of milk products cannot be expected in Estonia and increase in the production volume of milk products should be directed at export markets, of which the condition depends on the processes going on in global economy. In case of continual positive economic growth in rapidly developing countries, increase in demand for milk products can be expected there.

Supports

As in Estonian agriculture and food industry the dairy sector has always been of considerable importance, many different support measures have been directed at the sector. In Estonia, supports for the dairy sector have mainly been directed at primary producers of milk (figure 13). During 2001–2010, the dairy sector received about 591.3 million euros of support out of which supports for primary

producers made up 91.6 percent and supports for milk processors 8.4 percent. The share of the processing sector was bigger in 2009–2010, when a wide range of market organisation measures were applied to overcome low levels of milk market.

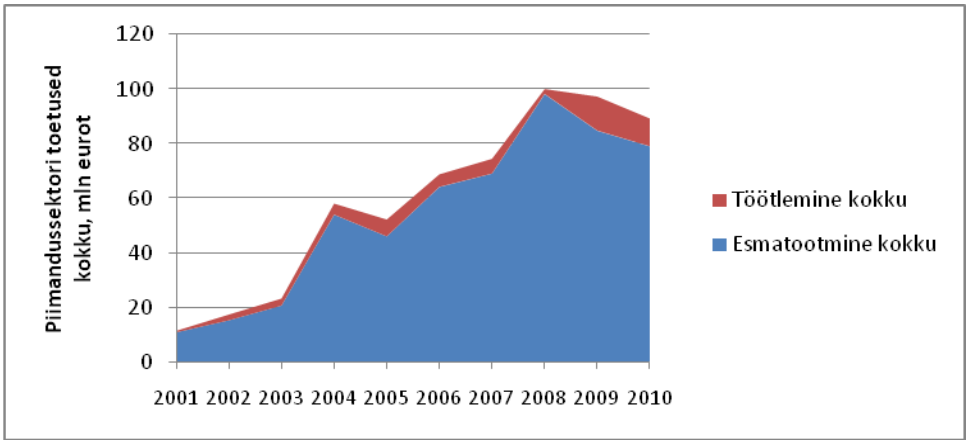


Figure 13. Supports for the primary producers and processors of milk in Estonia in 2001–2010, million euros.
Sources: drawn up on the basis of the ARIB (2005, 2006, 2007, 2008a, 2008c, 2009a, 2009b, 2010, 2011c), Ministry of Agriculture (2009), Rural Economy Research Department of the Institute of Economics and Social Sciences of the Estonian University of Life Sciences (2011), Jäneda Study and Advisory Centre (2001) data.

Figure 14 indicates that the share of support payments related to the primary producers of milk was the biggest in 2004–2006 and since 2007 has stayed at the level of approximately 20 million euros a year. But the source of coupled support payments has changed – if up to the year 2007 direct payments made up an important part of supports, since 2007 environmental support is the most important coupled support payment. Over the years, the importance of investment and development supports for primary processors has increased to some extent. It made up 23.8 percent of total supports for primary producers in 2001–2010. The importance of decoupled supports and emergency measures in total supports for primary producers has considerably increased.

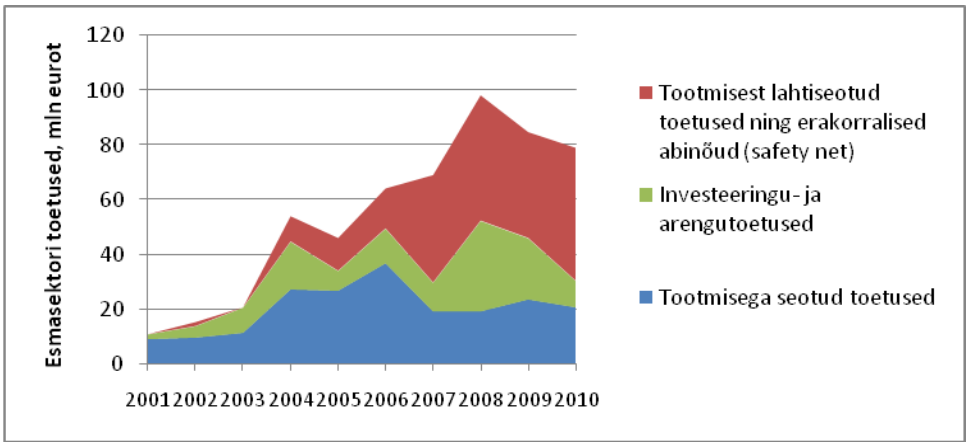


Figure 14. Supports for primary milk producers in Estonia in 2001–2010, million euros.
Sources: drawn up on the basis of the ARIB (2005, 2006, 2007, 2008a, 2008c, 2009a, 2009b, 2010, 2011c), Ministry of Agriculture (2009), Rural Economy Research Department of the Institute of Economics and Social Sciences of the Estonian University of Life Sciences (2011), Jäneda Study and Advisory Centre (2001) data.

Supports for market organisation and consumption make up the biggest part of supports for milk processors (figure 15). Consumption support concerns school

milk support which made up 1.5 percent of total support for the sector and 18.1 percent of the supports for processing industry in 2001–2010. In 2001–2010, the total sum of investment supports for dairy industry was estimated at 10 million euros which made up 1.7 percent of the total support for the dairy sector and 20.1 percent of total supports for dairy industry.

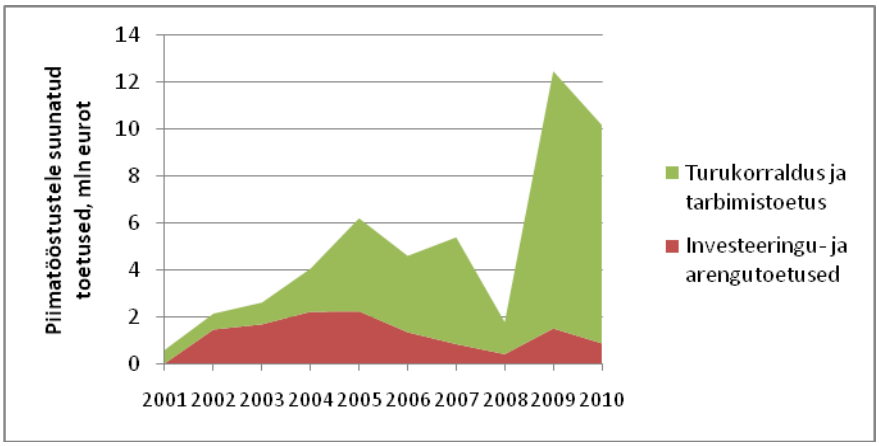


Figure 15. Supports for milk processors in Estonia in 2001–2010, million euros.
Sources: drawn up on the basis of the ARIB (2005, 2006, 2007, 2008a, 2008c, 2009a, 2009b, 2010, 2011c), Ministry of Agriculture (2009), Rural Economy Research Department of the Institute of Economics and Social Sciences of the Estonian University of Life Sciences (2011), Jäneda Study and Advisory Centre (2001) data.

By now, a big part of the supports paid to the dairy sector have been decoupled. During 2008–2010, decoupled support payments made up 22.1 percent, investment supports and the supports related to research and development 23.8 percent and consumption supports 1.3 percent of total supports for the dairy sector. Thus, the supports directly influencing the development of the sector made up 47.2 percent of all supports for the sector and 52.8 percent of supports were not related to the concrete objectives of the sector development.

The applied supports have influenced the dairy sector in several ways. They have contributed to the high quality of milk produced in Estonia as well as to the maintenance of the regional distribution of milk production. Nevertheless, the supports have not been sufficient to support the continuation of the activity of many small milk producers. At the same time, supports have enabled to make the structure of milk production more effective and competitive. Milk producers have been able to bring themselves into conformity with all hygiene and quality requirements and to increase the competitiveness of processing. But the impact of supports on change in the structure of processing has been moderate, a certain concentration of enterprises has occurred in the circle of owners.

Problems

1. Milk production, efficiency, animal numbers

Big loan burden. Coming from the long-time situation of low capitalisation, milk producers have eagerly been renovating their production (incl. investing into the best available techniques) with the help of the EU different support funds, bank loans and leasings.Within 2005–2011, dairy cow sheds were built or fully

reconstructed in 182 production units with 53 000 animal places (53 percent of the total number of cows). At the same time, producers have taken a big risk by that – in unfavourable market conditions it is difficult to pay back loans. There are no agricultural nor cooperative banks in Estonia and banks do not consider the special characteristics of agricultural holdings.

Unequal competition between the Member States. The CAP is not applied similarly in all Member States. Several states have the right for derogations or for the implementation of a transition period. Estonia has close neighbours, who are able to support their dairy sector much more than Estonia[1]. The fixed base yields and the historical reference levels not related to the activities and costs of the year of applying are a big source of unequal competition. Quality policies are also different in different Member States. Many new Member States have not been able to exhaust the value added proceeding from the Community quality marks or to fully adapt to the quality policy rules. This is why several new Member States have only a few products with a quality mark. The VAT rates applied on food products are different in different Member States[2]. Input prices are also unequal, compared to other Member States[3]. Many old Member States have contributed a lot to the development of both the dairy plants and the market and have got a better starting position in the situation where some former sustainable measures have expired by now.

Lower value added than the EU average. In 2008, in an EU-27 dairy production holding the average (net) value added per labour unit was 20 727 euros and 12 560 euros (~60 percent of the EU average) in Estonia.

Agricultural producers' high age, lack of qualified labour. Due to the relatively low wage level and other factors young people are not interested in hard farm work. Therefore, the sustainability of small production is in danger and due to the shortage of qualified labour large-scale producers are more and more forced to search for expensive technological solutions (milking robots, etc.), which in its turn will increase production costs and loan burden.

Threats to herd reproduction. In ten years, the average age of cows at their removal from the herd has decreased by 1.3 years. This means that the average number of lactations and progeny per dairy cow has also decreased. Therefore, the share of herd reproduction related costs in milk production costs has increased and this in its turn may increase the cost price of milk and reduce the competitiveness of Estonian milk producers. In 2001–2010, the importance of extremities diseases, traumas and metabolism diseases as the reason for animals' removal increased. This can be caused by the transition to the free-range system, the intensification of milk production and

[1] According to the FADN data, in 2008, the highest supports for milk producers (except investments) per one livestock unit were paid in Finland (1 379 EUR/LU) and the lowest in the United Kingdom (177 EUR/LU). At the same time, if the EU average support sum amounted to 314 EUR/LU, Estonian milk producers received 388 EUR/LU, Latvian producers 493 EUR/LU, Lithuanian producers 419 EUR/LU, Swedish producers 552 EUR/LU and Polish producers 242 EUR/LU.

[2] In Estonia, VAT on food products is 20 per cent, in England as a rule no VAT is applied to food products (except alcohol, beverages, ice cream, chips, confectionery), in 2009, Finland reduced its VAT of 17 per cent on food products to 12 per cent.

[3] E.g. the so called blue fuel excise duty, the approved minimum 21 EUR/1000 l, in Estonia 110,95 EUR/1000 l.

the related feeding problems. On the other hand, export of young animals is also threatening extended reproduction.

Threats to milk producers caused by climate change. The difficulties of predicting climate change make agricultural production poorly controlled and predicted and therefore, climate affected changes in production volume may grow over years. At the same time, due to restricted and costly insurance conditions agricultural producers are not interested in the insurance of their production activity. The use of research and development is too small to manage climate risks. By feed, the risks posed by climate change may threaten human health.

2. Efficiency of processing, export

Big loan burden. The loan burden of dairy plants is also big (production lines get obsolete very quickly and regular big investments must be made to stay in competition), but they can transfer their loss to agricultural producers during a limited period of time, which in its turn weakens milk producers.

Instability of export markets. The quantity of milk exceeding the demand of Estonian domestic market must be exported. In 2010, Estonian self-sufficiency level reached 162.5 percent. In case of sufficient foreign demand and successful sale the profit will be good, but if the world market milk prices are lower than the cost price of Estonian milk products, the plants will find it difficult to export the products. In such a situation, export is subsidised at the expense of domestic market and milk producers (particularly smaller). A lot of products of lower processing level (incl. of smaller value added), such as butter and powders, of which the prices are especially volatile on the world market, and raw milk are exported. At the same time, the prices of powders and butter are volatile and their production volume is also fluctuating. In 2011, the prices of butter were higher than the prices of cheese, thus, butter value was high in 2011. Therefore, regardless of the fact that often those products are exported as bulk goods, it is reasonable to maintain also the butter and powders production capacities and to improve productivity. Compared to big countries, Estonian dairy sector is very small and the market share of Estonian milk products is also small on export markets. At the same time, lower scale enables to be more flexible in reactions to market signals. Product development to develop export products of higher value added and more stable prices has not been sufficient for increase in export profitability and stability. For representation, customs proceedings and the supply of necessary documents, exporting dairy plants will need more help from Estonian embassies in foreign countries. Foreign trade policy towards the export markets outside the EU has not been supporting enough so far.

Lower value added than the EU average. In 2007, the average (gross) value added per annual work unit of the EU-27 dairy plants was 51 000 euros, in Estonia 22 900 euros (~45 percent of the EU average)[4]. As of April 2011, there were 31 milk handling undertakings in Estonia, of which two were development

[4] Indicators include the difference of support levels.

centres and one was only engaged in the purchase of raw milk. The number of processing units approved by the Veterinary and Food Board was bigger – 39 (many undertakings have several separate plants or other handling locations).The present processing capacity would enable the processing of about 800 000 tons of milk a year instead of 600 000 tons. It is possible to quickly and considerably increase powder production, but it is expensive to foster production capacities for the production of high value added products. As for the milk collection regions of dairy plants, there are some overlappings, which cause inefficiency and excessive transport costs. Due to low specialisation and insufficient cooperation, competition between dairy plants is stiff, product range relatively similar, broad and costly. Due to the wide range of products, the loss of raw material is big when one product is changed for another and equipment is washed meanwhile. Write-off of unused packages due to the short shelf life of products causes additional costs. It is very expensive to use large-scale production equipment for product development, therefore it is very important to improve cooperation with research and educational institutions who have the necessary basis for the creation and testing of small models. Product development provides prerequisites for the fresh milk products preferences of our consumers. The growth of private label products of retail chains to the higher level than 20–25 percent of undertaking's product portfolio endangers the survival of local production and processing.

Shortage of qualified labour. Dairy plants are also confronted with the difficulty to find qualified labour. There are shortages in the dairy sector in-service training and retraining system for adults, which is necessary to keep workers well informed about new technologies and requirements. No certificate of professional competence in dairy has been issued. If the Central Union of Estonian Farmers has the right to issue certificates of professional competence to agricultural producers, there is no organisation entitled to issue milk processors' certificates of professional competence (Association of Estonian Food Industry and Olustvere Service and Rural Economy School have taken an interest in the problem). The procedure of professional examination has not been worked out. So far, in-service training participation rates have been low.

3. Value added, research and development

The capability of producers and plants to move the production towards a more knowledge-based and environmentally friendly process is low. Investments into research and development are risky and of long payback period. The research related to milk production and processing does not always meet the expectations of producers and plants and often producers and processors cannot formulate the production problems in the solution of which scientific achievements would be of help. Links with the advisory system and research and development and with its possibilities are often weak or missing. Producers and processors are not ready to co-finance research.

4. Small production and processing, the environment

For small producers and for the farms in hardly accessible locations it is difficult to maintain and increase production. As of the end of 2010, there were 3 794 keepers of cows of dairy breed in the ARIB Register of Farm Animals and small cow keepers with 1–49 cows made up 92 percent of them. Many of them market

their milk locally, about a fifth are milk quota owners. Small producers are very often in a closed circle – due to low capacity to invest, it is not so easy to apply for investment support, to enlarge production and to conform to the necessary requirements, low and unstable milk quantity restricts investments. The milk producers not involved in the activity of cooperatives are often paid lower price for their milk, which reduces their competitiveness and worsens their terms of payment. For raw milk , dairy plants pay a different price depending on the quantity of milk produced by the producer (cow keeper) and on the location. So far, the price of milk paid to small producers has often been lower. Even short crises have bigger impact on small and weaker producers who may even stop production due to their exclusion from the milk collection round in hard times. In the islands of Western Estonia, milk producers must pay more for raw milk transportation due to their specific location. Due to the relatively low production volumes and regional dispersion of production, big dairy plants are not interested in the processing of organic milk and a big part of organic milk is processed with regular milk.

5. Joint activity, vertical cooperation, market access

Low willingness to cooperate in the chain (both between producers and between producers and processors). The importance of cooperative production and processing is low, joint activity of any kind is often chaotic. The share of cooperative dairy plants in the purchase of raw milk is only a bit more than 20 percent. In case of difficulties, the positive characteristics of cooperative activity are not used for the benefit of the members of the cooperative. Due to disunion, producers do not have much possibility to have their say in milk price formation. In Estonia, the purchase price of milk has mainly stayed among the EU lowest prices, but input (equipment, fuel, fertilizers, etc.) prices are on the Western European level. In case of price fluctuations, producers are most vulnerable as real profit from increase in consumer prices reaches the producer (the last link of the chain) in a long period of time, but in case of price fall impact on the price paid to producers is immediate. The opaqueness of price formation and want of cooperation are reasons for the confrontation of producers and processors and distrust in business partners.

Increase in the influence of chained retail trade. Chained retail trade expects from suppliers big and regular lots of goods and very low prices. This reduces small producers' opportunities to enter the market and the profit margin of all dairy plants. International retail chains are searching for cheaper suppliers from several neighbouring countries, reducing high transportation costs and differences in consumer preferences, which have functioned as domestic market protection measures up to now. Trade chains (producer-processor-trade) belonging to producers' cooperatives are missing. Trading area per capita is very big in Estonia, increasing retail trade costs. The small undertakings scattered so far have initiated short supply chains and direct marketing, in order to raise their marketing power in competition with retail chains.

6. Consumption of milk products

Decrease in the consumption of milk products and in preference to local products[5]. Due to the fall in the purchasing power of population and increase in the price of milk products, the consumption of milk products on the domestic market fell to 299 kg in 2010. Purchase decision making does not so much depend on the country of origin any more.

7. Assurance of the sector, stability

Producers and processors lack assurance over the state's vision of the future of the sector. A better formulated vision of the future and a clear message about the development of the dairy sector would provide undertakings with bigger assurance for making business decisions.

Producers' and processors' big loan burden. Banks do not consider the specialties of agricultural holdings. The loan burden of dairy plants is also big, but they can transfer their loss to agricultural producers during a limited period of time, which in its turn weakens milk producers.

Volatility of the world market prices. If the world market milk prices are lower than the cost price of Estonian milk products, the plants will find it difficult to export their products. In such a situation, export is subsidised at the expense of domestic market and milk producers (particularly smaller). A lot of products of lower processing level (incl. of smaller value added), such as butter and powders, of which the prices are especially volatile on the world market, and raw milk are exported. At the same time, the prices of powders and butter are volatile and their production volume is fluctuating.

[5] According to the survey of the Estonian Institute of Economic Research "Population's nutritional habits and food buying preferences in 2010" preference to domestic food makes up 66 per cent, i.e. 4 percentage points less than in 2009 and 8 percentage points less than in 2007.

Strategic objectives

1. **Increase in milk production, improvement of the efficiency of production and growth in the number of dairy cows.** The objective is to ensure the chain based sustainability of the dairy sector, to maintain the annual milk production in the short run and to increase it by a third in the long run, increasing the number of dairy cows and improving milk production. Sustainability, efficiency and increase will be achieved by the reconstruction of livestock buildings, increase in cowshed occupancy rate and energy efficiency, use of scientific cooperation for the improvement of animal genetic material and feeding and for the extension of the period to keep animals in the herd in an environmentally friendly way, preserving natural resources and in view of structural balance.

2. **Increase in milk processing efficiency and export orientation.** To improve the efficiency of milk processing, supporting to much bigger extent than so far the concentration of bigger dairy plants and the technological and technical modernisation of processing units, the introduction of innovative solutions and energy efficiency and considerably improving the export orientation of processing industry and the balance of export markets and exported products.

3. **Creation of higher value added.** To increase the share of higher value added products, incl. functional products both in production and export, introducing the possibilities offered by research and development and relying upon the relevant technological platform (for instance using in product development the possibilities offered under the European technological platform "Food for Life").

4. **Maintenance of small production and processing, traditional agricultural landscapes and clean environment.** To contribute to the maintenance of rural settlement, to maintain and support small production and processing as a guarantee of the availability of food supplies (food security). To support the development of short supply chains and direct marketing and to help the niche and innovative specific products[6], incl. organic products, reach the consumer, providing the consumer with a sufficient number of product options and increasing small producers' and processors' competitiveness. To contribute to the maintenance of traditional agricultural landscapes and clean environment through the maintenance of traditional farming.

5. **Development of joint activity and vertical cooperation.** To support the development of favourable conditions for the promotion of joint activity and vertical cooperation, to draw more attention to the development of different ways of cooperative milk processing, also in the form of cooperation between capital companies and cooperatives. Besides, the negotiation power of

[6] Incl. goat, sheep and horse milk and milk products.

different links of the chain must be balanced, in order to improve market access.

6. **Increase in the consumption of milk products.** To increase the consumption of milk products, supporting and promoting the information given to consumers about local high quality products of higher value added.

7. **Assurance and stability of the sector.** To emphasize the importance of dairy and to support the interests of the sector. To prepare anti-crisis measures in order to ensure the stability of the sector even in crisis situations (incl. for the alleviation of loan burden).

5. Measures and activities

Proceeding from the strategic objectives set for the solution of the problems detected in the development of the strategy and in view of the vision of the dairy sector, the following indicates the existing and planned measures and activities of which the introduction and use will enable the achievement of the above mentioned objectives. Finding out and indicating the measures supporting the dairy sector will enable to use the strategy as a source for the development of different programming documents, incl. the RDP support schemes.