Food safety in Finland

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INVEST IN FINLAND

Business Opportunities and
Consulting Services for
International Companies

Content of this report

1. Executive summary

This report describes the status of Finnish food safety and outlines the most important competence areas from a business perspective and from the perspective of foreign companies and entrepreneurs setting up business in Finland.

A safe journey from field to fork

Finnish food safety is rated among the highest in the world with food borne outbreaks of illness consistently low for many years – proof that Finland's food chain players and the authorities have jointly succeeded in offering safe and good quality food to consumers. Finland's excellent food safety record is based on a well-established philosophy: management of the entire food chain from field to fork and good practices are applied throughout the whole chain.

Finnish food safety competence is built upon three fundamentals:

1. Primary production and Zoonose management

2. Internationally Qualified Food Manufacturing

3. Cold chain and Traceability

In Primary production, the key is in ensuring the safety of raw material for food processing. Finland has pure raw materials and good practices have been developed and are supported by both production technology and ICT applications. Finland's small domestic market means the scale of the business is also rather small. **Business potential exists therefore in the cooperation with Finnish companies for international markets**.

In internationally Qualified Food Manufacturing safeguarding food processing by hygienic production technologies is essential. Technology companies have matched the demand of food companies and good solutions have been developed together. However, companies do not offer complete food safety solution and marketing is quite often technology driven. **Concept development in cooperation with Finnish companies for international markets is an identifiable business opportunity.**

Reliable cold storage and transport with control systems ensure food safety from primary production to the consumer. Many ICT applications exist to monitor products on-line en route from primary production to the consumer. In this delivery cycle much data is collected in electric form but not used fully. **While traceability is well managed within food companies an on-line system that would also benefit consumers is still missing.**

In Finland, there are many business opportunities for foreign companies but further investigation into the issue is needed. The business sector is under development and frequent follow up is recommended.

2. Introduction

“Food safety aims to assure a high level of food safety, animal health, animal welfare and plant health within the European Union through coherent farm-to-table measures and adequate monitoring, while ensuring the effective functioning of the internal market.” EU Authorities

2.1. Global mega trends – threats and opportunities

Food safety is an acute topic both in developed and less developed countries with both types facing their own particular challenges. Intensive food production, such as large animal farms, long transportation distances, the processing of raw materials and mass medication of farm animals all risk food safety.

Globalisation and global food markets are two mega trends affecting global supply and the demand for food. This global movement of food and livestock requires vigilance in maintaining food safety and limiting disease risk. However, with the threats of globalisation also come new market opportunities for farmers and entrepreneurs involved in the agribusiness. Demand for high quality primary and processed food products is increasing. Economies of scale and good logistical solutions are required from food manufacturers.

2.2. Finnish Food safety – among the best in the world

“The focus in food control has shifted from the study of final products to the different stages of the production chain, especially hygiene in primary production. Food safety is guaranteed by ensuring the safety of raw materials. Quality control of foodstuffs is founded on self-checks of the food companies, which are monitored by the authorities. The municipalities have the main responsibility for food control.” (Ministry of Agriculture and Forestry)

Finnish food safety is among the best in the world as supported by those figures drawn from international comparisons. The number of zoonotic diseases transmitted to humans accounted for only 0,06 per cent of the population during the period 1995–2004. Forbidden hormones have not been found in any animal-derived food. Since food contamination can occur at any stage from primary production to the table, everyone in the Quality Chain plays a role in food safety; farmers, processors, vendors, and consumers – all have a role in upholding food safety.

2.3. Food control extends from the field to the consumer

Finland’s excellent food safety record is the result of a long-lasting and systematic scientific contribution. National Quality Strategy formulated by the Ministry of Agriculture and Forestry together with food chain players provides a solid background for the safety of foodstuffs covering the whole Quality Chain. http://www.laatuketju.fi/laatuketju/www/en/index.php

3. The Finnish Food Safety Environment

3.1. The Finnish Food Chain – a significant sector

Finland's food sector is a significant one employing 240 000–300 000 people (depending on how this is calculated). This figure includes the sub sectors: primary production, food processing, retail, logistics and services. The sector's share of GNP including imports and subsidies for agriculture is about 10-11 per cent.

Finland's food industry is the fourth biggest industry sector after metal, forest and the chemical industry. Internationalisation of Finnish companies has generated some growth in the food sector. In 2008, the gross value of the sector was 10,5 billion EUR and the net value has stayed at the same level for several years accounting for 2,3 billion EUR.

For more detailed information, see Appendixes 1 and 2.

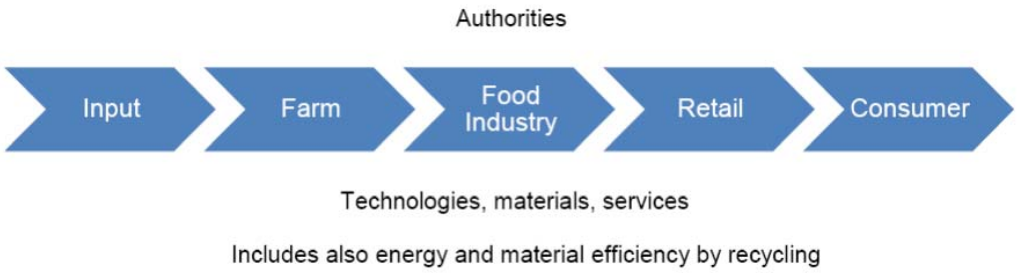

Figure 1. Finnish Food Chain

3.2. Finland's food safety business environment

Food safety is respected in Finnish society and all players in the food chain want to do their best to maintain Finland's excellent status in it. Food safety is also actively supported by the Finnish authorities who have established a Food Development Cluster Programme and five centres of expertise. There are several long-lasting development programs for farmers and the food industry, which have helped in sharing both knowledge and know how in food safety issues. Finnish food safety is based on EU legislation and the principles outlined by the WTO.
http://ec.europa.eu/food/intro_en.htm, http://www.wto.org/english/tratop_e/sps_e/sps_e.htm.

Finland boasts strong organisational players and authorities that support the food chain by offering different services for companies and farmers. The key player, *Evira,* is the agency for Finnish food safety that controls and inspects the quality and the safety of food products. In addition, Evira conducts scientific research, risk assessment, analytical and diagnostic studies of animal diseases and food safety under the Ministry of Agriculture and Forestry.
http://www.mmm.fi/attachments/mmm/julkaisut/esitteet/5kXf5al29/mmm_elo_en.pdf

One of the special features of the Finnish food safety market is that the Finnish public sector supports the formulation of competence clusters e.g. an RFID Lab Finland is already active and a

Finnish Food Safety Cluster is under formation. R&D in both the food and safety sector is financially supported by Tekes – the Finnish Funding Agency for Technology and Innovation.

Furthermore, Finland has focused on offering high-level education and research in the area of food in three of its universities (Helsinki, Turku and Kuopio). For example, under the University of Helsinki and the Academy of Finland, there is the Finnish Centre of Excellence in Microbial Food Safety research (i.e. MiFoSa) focusing on reducing food microbial risk factors present throughout the entire food chain.

4. Finnish Food Safety Competences

In Finland, excellent food safety is based on a well-established philosophy: management of the entire food chain from field to fork. The Finnish fields of competence encompassing it can be named as follows:
Primary production, Zoonose Diagnostics and Management, Internationally Qualified Food Manufacturing and Cold Chain and Traceability.

4.1. Primary production and Zoonose management

Food safety begins on farms including the products and the services used there. Competence areas in the Finnish primary sector are focused on *Total Quality Management (TQM), plant husbandry and animal husbandry sector.* TQM includes consultancy and training, IT solutions and processes, and know how, for example by the ProAgria Group (Agricultural Data Processing Centre).

The Association for Animal Disease Prevention (ETT) promotes farm animal health and welfare by offering database services and management tools for farmers. Finland's technology orientation also reflects in the sector's use of ICT solutions. Statistics from 2007 show that 82 per cent of farms had computers and 77 per cent had an Internet connection (TIKE). The mobile phone penetration rate in Finland is now well over 100 per cent enabling alerts and remote control. Computer programs are helping farmers to fight animal diseases, achieve better yields, increase profitability with less input and produce better quality raw material for the food industry.

4.1.1. International recognition for plant husbandry, animal husbandry in good health

In the *Plant husbandry* sector, the quality of seeds and especially seed potatoes is internationally recognised to be at a high level (e.g. Pohjoisen Kantaperuna, Suomen Siemenperunakeskus). The EU has designated certain areas in Finland as High Grade Regions for high quality seed potato production. Fertilisers are pure with exceptionally low heavy metal content (e.g. Yara). Use of fertiliser is kept to a minimum. Pesticide use is also at a low level based on international comparisons. Finland has long traditions in securing grain quality in farm storage. Finland also boasts high quality natural water for primary production and food processing as well as for drinking water.

In the *animal husbandry* sector, thanks to long-term prevention programs, there is a very low incidence of transmittable infectious animal diseases. Thus, livestock is healthy with good growth and breeding. The use of veterinary medicines is kept to a minimum. Preventive programs help to limit the incidence of antimicrobial resistance. Finland has implemented a national salmonella control program since 1995. The control program begins from primary production and the operators in the food sector carry the main responsibility for safe foodstuffs. There is solid cooperation between the private sector, authorities and associations.

ETT promotes farm animal health and welfare by coordinating national herd health schemes and by instructing the import of animals, semen, embryos and animal feed. These measures control the risks of animal diseases and form the basis for the safety of foodstuffs derived from domestic animals.

The ProAgria Group (Faba) is internationally renowned for its healthy animals and semen for artificial insemination. NeuroAgent offers RFID-based solutions for animal identification. Pellonpaja has technology for raising healthy pigs based on innovative methods. Major feed companies in Finland

are the Raisio Group and Suomen Rehu, which offers for example feed for preventing intestinal inflammations.

In the matter of infections transmitted from animals to humans and from humans to animals, there are companies involved in microbiological diagnostics (e.g. Finnzymes) and the detection of antibiotic residues and know-how on *zoonose* management (e.g. Evira, Seth). In 2007, Raisio Diagnostics was bought by BioControl Systems Inc., which is a leader in the development of innovative microbiological tests for the food industry.

Foreign companies, serving the primary sector, include such players as Yara (fertilizers), HZPC Kantaperuna (seed potatoes), DeLaval (milking machinery) and Niras (international consulting). In addition, ThermoFischer offers diagnostics.

4.2. Internationally Qualified Food Manufacturing

Finland's high technology focus can also be seen in the food sector. Hygiene is maintained at an exceptional level as human touch is minimised in food processing by automation with package systems also in place for detecting spoiled food. A few Finnish food technology companies, mostly SMEs, specialise in serving food producers in Finland and abroad offering efficient hygienic solutions. Food companies themselves know best about food safety and despite the relatively small size of the Finnish market, there are food companies which exhibit state-of-the-art know how and technologies for producing safe food.

Examples of technology and engineering companies include Antti Lindfors, Kometos, Elecster, Amitec, Rintekno whereas Farmos, Biocid and Orion Diagnostics represent examples of hygiene solutions. New innovation such as advanced coating materials is offered by Millidyne. There are many packaging material suppliers who offer and develop intelligent solutions for food companies. (http://www.pakkaus.com/engl.html). Moreover, Foodwest, LTK and NetFoodLab offer laboratory and consultancy services in food safety for food companies. Know how ensures the highest hygiene demands and not only according to those standards set by the EU.

Examples of foreign companies with a subsidiary in Finland are Multivac and Tetra Pak (i.e. food processing and packaging companies) as well as ProMinent Finland (i.e. disinfection systems) and Ecolab (i.e. hygiene solutions). In addition, the Swedish food company Arla has recently increased its activity in Finland.

4.3. Cold chain and Traceability

Finnish cold chain and logistic competence is based on solid know how in the area of cold/warm temperature management in transportation, warehousing and the retail trade (e.g. Huurre, Helkama Forste, Norpe, Jääsaukko, and Lumikko). There are many companies from the ICT sector that are specialised in this sector offering systems and solutions for food factories and the retail sector (e.g. Digia, Aldata Solutions, Ekoweb, A-Lab).

As defined by Evira, food traceability means that "food and feed business operators shall be able to identify any person from whom they have been supplied with a food, a feed and a food-producing animal, or any substance intended to be, or expected to be, incorporated into a food or feed and shall have in place a system and procedures to identify the other business to which their products have been supplied."

In the case of food safety problems and product recall, quickly tracking down the origin in order to correct it is essential. Write-offs related to product recalls are huge and most big food companies in USA and Europe are investing in ways to minimise them (AMR Research).

Finnish traceability knowledge is concentrated on *diagnostic techniques, data management in primary production and data management in logistics* (warehousing and transportation). Finland's competence area within food traceability is ***RFID technology***. There are some companies which are forest industry based spin-offs (e.g. UPM Raflatac, Confidex) offering tags and solutions for all industry sectors that are interested in traceability systems. This technology enables the following-up of real-time conditions in the field, warehouses, and in the logistic chain from food producer to consumer.

RFID technology is not yet widely used in the food sector but there is growing interest in it. Examples from abroad such as Wal-Mart in United States, Tesco in United Kingdom and the Metro Group in Germany have been encouraging the Finnish logistic and retail chain parties to consider investing in the technology.

Foreign companies based in Finland include e.g. Danfoss, Optiscan Group, and Logica.

5. Strengths and weaknesses in Finnish Food Safety

5.1. Strengths

The Finnish food chain has several strengths, which are usually linked with good *cooperation* between parties operating in the value chain. As a result, the food industry, farmers, logistic companies, authorities and input companies are closely *working together* in order to maintain the safety of food from primary production to consumer. These connections are *open and transparent* which has helped to develop excellent procedures to ensure good quality and safe food. Throughout the chain, all information from the analyses in food control can be obtained by all parties, including consumers.

Cooperation is based on the Quality Chain work established in the 1990s and its positive impact on the organisation of producers, industry, the retail sector, consumers and authorities. Good production practices are applied.

Table 1. Strengths of Finnish Food Safety

Excellent management of the entire food chain
•From field to fork •Transparent food control results
Safe raw material from primary production
•Well-developed and used IT solutions and databases on farm level •Pure plant and animal breeding material •Removal of many animal diseases and minimized occurence of e.g. salmonella •Soil analysis as a routine on farms •Use of pesticides minimal
Food safety in processing
•High level of food safety at food companies •Technology companies have matched the highest hygienic demands and good solutions have emerged
Food safety in logistics from primary production to consumer
•Environmentally friendly techonology and know-how for thermo transport and storage •Well-organized traceability •Active RFID cluster to enhance the business activity
Supporting business environment
•High level of research and technological competence •Well educated people •Obedience to the law •Organizational players and authorities •Finland's reputation

Food safety in Finland is based on *the excellent management of the entire food chain* from field to fork.

The key to food safety is *ensuring safe raw material from primary production*. Both plant and animal breeding material is pure. This enables optimal growth. There are also disease free eggs for the breeding of chickens. Finland has been able to eradicate many animal diseases and minimise the

occurrence of e.g. salmonella. ETT guidelines help to prevent animal diseases. Soil analysis is a routine on farms due to the strict environmental subsidy system leading to minimalisation of the use of fertilisers. IT solutions and databases at a farm level are well developed and used, for example in helping a farmer to manage the farm effectively and profitably while still producing safe food.

Another strength lies in *ensuring food safety in processing*. The level of food safety in food companies is high and recalls are quite rare. Technology companies have matched the highest hygienic demands and good solutions have emerged in cooperation with food companies.

Finnish food safety is strong *in logistics from primary production to the consumer.* Companies have environmentally friendly technology and know how for thermo sensitive transport and storage. Traceability within food companies is also well organised. Moreover, there is an active RFID cluster to enhance business activity based on Finnish know how in the area of automatic identification and especially in the RFID business area.

Finally, *supporting the business environment* is also one of the strengths of Finnish food safety. This involves high level technological competence in the whole food chain supported by an excellent education system and adherance to laws and regulations. Furthermore, control, measurement and reporting are done carefully. Finland has strong organisational players and authorities supporting the food chain. Moreover, Finland's reputation is excellent as a clean and well-organised country in food safety issues among other food safety authorities abroad.

5.2. Weaknesses

There are several strengths with regard to Finnish food safety as was discussed earlier in this report. However, some weaknesses do exist and need to be addressed. (Table 2.)

Table 2. Weaknesses of Finnish Food Safety

The core strength is not easily commercialized
Technology capabilities and marketing tools
• No online systems offering product information on origin of raw materials reaching consumers • Electronic food chain information not fully utilized • Finnish traceability "field to fork" solution provider missing • New type of traceability systems may be needed • Low level of technology and service provider's participation in National Quality Strategy work
Small scale and limited resources
• Limited competence in animal disease and zoonose management on large farms • Small capacity of the plant and animal breeding material for export • Marketing and sales of food safety • Companies rather small and with limited resources to take care of international markets • Low risk taking level

To begin with, the core strength "*Excellent management of the entire food chain from field to fork"* is not easily commercialised. Know-how of management of the entire food value chain is not easily transferred to other markets nationwide because of the existing infrastructure and traditions. In Finland, food safety as a business is new and sometimes companies do not even recognise that they are in the food safety business.

Secondly, *technology capabilities and marketing tools are under utilised*. Traditionally, the Finnish consumer has trusted Finnish food and food chain information in electronic form (i.e. data bases) is not fully utilised commercially. Further, nobody has invested in any on-line system offering comprehensive product information and the origin of raw materials upon reaching consumers. There is, however, already an example of a service offering nutrition information for consumers (www.ravintokoodi.fi) and research on a product's carbon footprint with first practical applications (www.raisio.com). For example, in Austria, there is an organic private label brand, which offers information of the whole chain including the circumstances of the farm and its carbon footprint. www.zurueckzumursprung.at.

In Finland, the organic food market is still developing and there are not so many Finnish organic products yet available in supermarkets. Traditionally it is believed that "normal" Finnish food is as pure as it is organic.

In addition to technology capabilities and marketing tools, if potential food scandals do emerge, new types of traceability systems may be needed. Finnish companies offering online global traceability solutions such as those offered by Norwegian TraceTracker are notable by their absence (www.tracetracker.com). Moreover, many technology and service providers are not so actively participating in National Quality Strategy work.

The third weakness of Finnish food safety is the problem of *small scale and limited resources*. There is limited competence in animal disease and zoonose management on large farms. Farms are getting bigger in Finland and on the other hand, only through Finnish companies delivering projects abroad, will experience be gained. The capacity of the plant and animal breeding material for export is rather small. At the same time, there are only few plant varieties and animal breeds available at present in Finland.

Marketing and sales is not a traditional strength in Finnish companies and this applies also to this sector. Food safety is not well communicated. Marketing is often technology-driven. Companies do not offer complete solutions for food safety because they either do not realise the business potential in that area or lack the capacity to conceptualise their know-how.

Many companies are rather small in the field of "Internationally qualified food manufacturing" and do not have sufficient resources for taking care of international markets. Finally, the risk taking level of the SMEs is often not high.

6. Business potential for foreign companies

The Food Safety sector is new as a business area globally and no business statistics exist. The potential for the global food safety business is enormous.

In general, companies in Finland grow by expanding outwards to international markets. Finland has managed to maintain its reputation as a producer of pure and safe food in the domestic market but the value of Finnish know how, a company or a product can often be assessed by its possibilities abroad.

Table 3. Business potential in Finnish Food Safety

Potential for commercialisation

The know-how of management of the entire food chain for safe food could be commercialised. Countries in transition, such as new EU countries, Russia (CIS) and China, are examples of potential markets. A potential client could be any food company having full control of raw material production, processing and distribution or even a whole nation (government). Technology and know how from different sub-sectors is naturally easier to sell.

In general, marketing and sales are not considered strengths for Finnish companies and foreign players with strong sector specific marketing skills and effective sales organisation could bring added value.

In terms of primary production and zoonose management, there might be business opportunities in increasing the present limited capacity of e.g. plant and animal breeding for export in cooperation

with local players. Production of disease-free eggs for breeding may offer possibilities. Finland also offers good R&D environment in animal disease and zoonose management as there are interesting public and private potential partners in this field. Furthermore, there might be business opportunities to invest in R&D companies, based on Finnish know-how; for example how to manage farms within the food chain. This includes education, technical solutions and the auditing of a farm's processes. Finnish expertise includes experience with over 22 000 farms in milk, meat and grain production.

Within a joint venture company, innovative solutions would be based on Finnish knowledge and technology combined with ideas and views from the international target markets.

Business potential may also be found in the field of internationally qualified food manufacturing. Authorities and food companies in countries in transition, e.g. Russia, are realising that improvements are needed in order to offer safe food for human consumption. For this, turn key delivery including not only technology but also food safety consulting may be required. This may offer possibilities for foreign players together with Finnish companies in the commercialisation of know-how combined with technologies. Also, cooperation directly with Finnish food companies could be explored.

Finnish food companies do not see a lot of business potential in the organic food market yet. Arla-Ingman, which is part of the Danish-Swedish origin dairy company, the biggest organic dairy product producer in the world (www.arla.com), is increasingly active in the Finnish organic food sector. There might be business opportunities for investment in organic farming and industrial processes including marketing. Finland is an ideal area for organic farming and the proportion of organic production could easily be increased provided there is a partner responsible for the business.

Due to ever increasing competition and high costs, there is the danger that the culture of good food safety culture weakens. Therefore the productisation of safe food becomes an imperative. One business opportunity could be the development of specialty products with guaranteed food safety and certain production methods in the whole chain, e.g. baby food or other niche products.

Finally, business potential exists in the cold chain and traceability area. There is a huge need to improve cold chain performance in countries in transition, especially India, and companies from these countries may find cooperation possibilities in Finland. Moreover, technology producers and other companies may find opportunities in Finland for joint development of food traceability systems “from field to fork”. Traceability as such is well done in Finland but it but related information of the product is not utilised in marketing. There is room for a service supplier compiling the information of products, e.g. origin, carbon foot print and nutrition to be easily utilised by consumer by Internet or mobile phone.

7. Conclusions

Serious food borne outbreaks of illness have highlighted the importance of all actions in the food chain affecting food safety globally. Finland's business environment is at the moment favourable for the food sector. There are several public players offering services and financing for companies to boost business and new technologies can be easily adapted if available.

Overall, food safety as a business is new in Finland and companies operate separately and are often selling technology, not solutions for safe food. Finnish knowledge of food safety remains to be conceptualised and commercialised. Its business potential is therefore huge but only during the last few years, have companies started to realise the potential. At the moment, the Finnish food safety cluster is under development, which may speed up business. However, there are already some foreign investments in this sector.

Finland has a small domestic market and accordingly, any business for foreign investors is probably export-related. The opportunities are within IT and other technologies for primary production, zoonose diagnostics and management, internationally qualified food manufacturing and cold chain and traceability. Many companies are SMEs and lack resources for sales and marketing, long term planning and risk taking.

There is lot of potential in the Finnish food safety sector and this offers opportunities for foreign companies looking for state-of-the-art complementary products and services for their portfolio. More detailed studies are needed for company specific needs. The sector is under development, many innovations are in the pipeline and the business environment is evolving. Frequent follow up is essential.

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www-pages:

Agropolis www.agropolis.fi

ETL Finnish Food and Drink Industries’ Federation. www.etl.fi

ETT Association for Animal Disease Prevention in Finland www.ett.fi

European Union. Food Safety. http://ec.europa.eu/food

EVIRA Finnish Food Safety Authority www.evira.fi

Finfood www.finfood.fi / www.ruokatieto.fi

Finnish Packaging Association http://www.pakkaus.com

FINPRO Comprehensive internationalization services around the world. www.finpro.fi

FINPRO and Food Safety www.finpro.fi/foodsafety

Food Development Cluster Program www.fooddevelopment.fi

Quality Chain www.laatuketju.fi

Ministry of Agriculture and Forestry www.mmm.fi

MTK The Central Union of Agricultural Producers and Forest Owners www.mtk.fi

MTT Agrifood Research Finland: https://portal.mtt.fi/portal/page/portal/mtt_en

PTR Association of Packaging Technology and Research www.ptr.fi

PTY The Finnish Grocery Trade Association www.pty.fi

TEKES Finnish Funding Agency for Technology and Innovation www.tekes.fi

The Federation of Finnish Technology Industries http://www.teknologiateollisuus.fi

Tike, Information Centre of the Ministry of Agriculture and Forestry in Finland www.tike.fi

Traceability Institute http://www.traceability-institute.com/

University of Helsinki, Faculty of Agriculture and Forestry http://www.mm.helsinki.fi/english/index.html

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Valio (food manufacturer) www.valio.fi

Atria (food manufacturer) www.atria.fi

Logica (IT integrator/software company) www.logica.fi

Foodwest (Centre of expertise) www.foodwest.fi

Viikki Food Center (Centre of expertise) www.viikkifoodcentre.fi

Evira (authority) www.evira.fi

ProAgria (primary production) www.proagria.fi

Finnzymes (primary production, zoonoses) www.finnzymes.fi

Sesca (transport management IT systems for cold chain and logistics) www.sesca.com

Yara (fertilizers, ex. Kemira GrowHow) www.yara.com

Discussions with several food chain companies.

Appendix 1

Food companies

Food companies employ 34 585 people and over 70 per cent of employees work in production. A large share of production (83 per cent of gross value) is sold to the domestic market. The remaining share is allocated for export purposes. The two most important export markets are Russia (23 per cent) and Sweden (16 per cent). EU countries account for 55,5 per cent of total exports. The main export products are cheese, alcohol, butter, pork and sucrochemical products. Respectively, 71 per cent of import comes from EU countries.

Finnish food producers are usually quite small and only 23 companies employ more than 250 people. The biggest food producers are internationally well-known companies and highly technology oriented. More information http://www.etl.fi/www/en/index.php

Agricultural sector

The total amount of ***farms*** was 65 802 in 2007. Almost all farms are family-owned and 32 per cent of farms in 2007 were husbandry farms and 62 per cent crop farms. Finnish farms are typically quite small and thus farms having over 100 hectares are very rare (only 5 per cent of all the farms).

Trade and retail

Finnish ***retail trade*** is in the hands of three big players: S-ryhmä (42,4 per cent), K-ryhmä (33,7 per cent) and Suomen Lähikauppa Oy (11,3 per cent). Lidl has increased its market share in Finland. Retail trade employed about 50 000 people in 2007 and the number of retail shops was 3 922 at the beginning of 2008. Finnish retail trade has invested in the renewal of its retail shop network and concept, which has impacted its growing product selection. Together with the food industry, retail trade has developed its delivery network (logistics) and IT systems related to order and delivery.

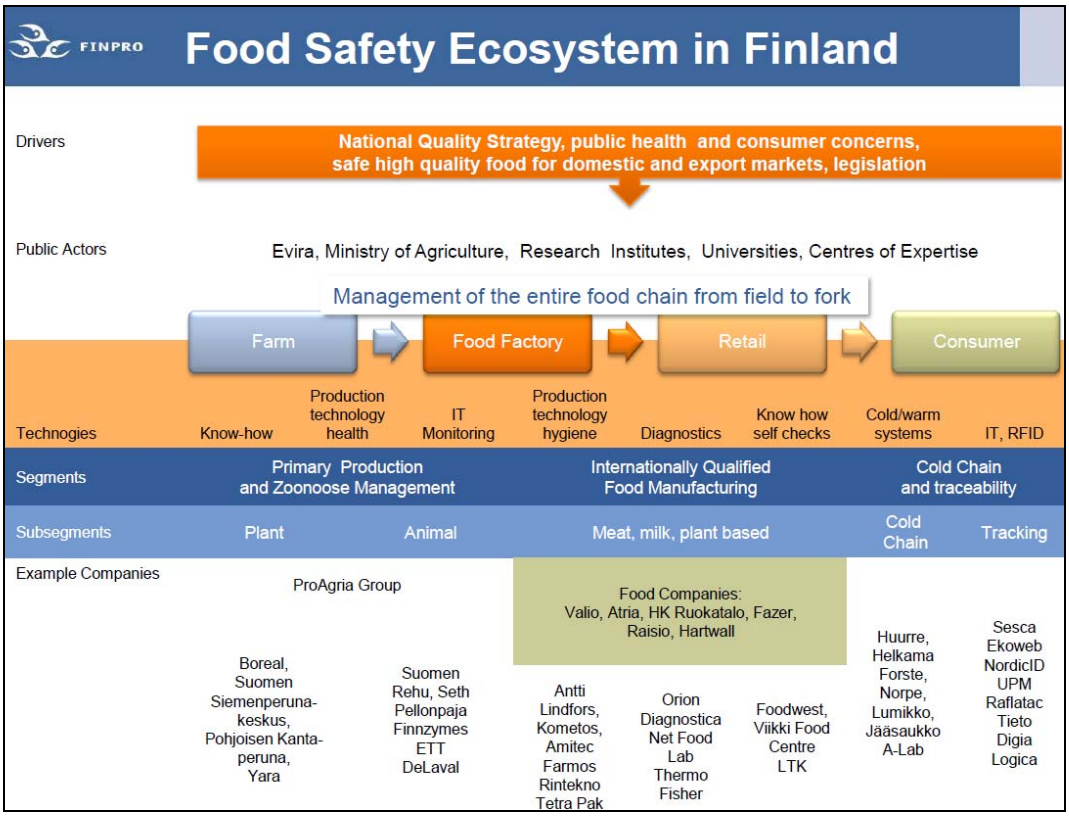
Hotel, restaurant and catering (Horeca) and consumers

The role of this sub-sector is growing in the Finnish market because of the growing trend of “dining outside the home”. There are about 22 000 professional kitchens in the market and in 2008, meals prepared by the Horeca sector accounted for 811 million portions. Furthermore, one out of three people uses the services of Horeca sector on a daily basis, whereas an average Finn eats yearly 153 meals cooked in professional kitchens.

Market information based on statistics by the Ministry of Agriculture and Forestry

http://www.mmm.fi/attachments/elintarvikkeet/5HKe7TYp2/Ruokastrategia_taustaselvitys.pdf_UUSI.pdf

Appendix 2


FINPRO
Food Safety Ecosystem in Finland
Drivers
National Quality Strategy, public health and consumer concerns, safe high quality food for domestic and export markets, legislation
Public Actors
Evira, Ministry of Agriculture, Research Institutes, Universities, Centres of Expertise
Management of the entire food chain from field to fork
Farm
Food Factory
Retail
Consumer
Technogies
Know-how
Production technology health
IT Monitoring
Production technology hygiene
Diagnostics
Know how self checks
Cold/warm systems
IT, RFID
Segments
Primary Production and Zoonoose Management
Internationally Qualified Food Manufacturing
Cold Chain and traceability
Subsegments
Plant
Animal
Meat, milk, plant based
Cold Chain
Tracking
Example Companies
ProAgria Group
Food Companies: Valio, Atria, HK Ruokatalo, Fazer, Raisio, Hartwall
Boreal, Suomen Siemenperuna-keskus, Pohjoisen Kanta-peruna, Yara
Suomen Rehu, Seth Pellonpaja Finnzymes ETT DeLaval
Antti Lindfors, Kometos, Amitec Farmos Rintekno Tetra Pak
Orion Diagnostica Net Food Lab Thermo Fisher
Foodwest, Viikki Food Centre LTK
Huurre, Helkama Forste, Norpe, Lumikko, Jääsaukko A-Lab
Sesca Ekoweb NordicID UPM Raflatac Tieto Digia Logica