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# PRIVATE REGULATION OF VALUE CHAINS IN FINNISH PORK INDUSTRY

– How private regulation schemes are used and  
could be used to ensure quality



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The purpose of this research was to explain the basic features of Finnish pork production and what are the means to control food safety beyond the legislation. Customers and business partners alike have begun to expect higher standards in hygiene, food safety and animal welfare, and are often concerned whether the current legislation is up to date to enforce the wanted level of quality. For this purpose a set of different types of voluntary programs and private regulation schemes have been established to offer retailers and other companies the means to control their own operations as well as their suppliers in the value chain.

The goal of the research was to find out to what extent Finnish meat companies and retailers use private regulation to monitor their value chains regarding pork meat. Also the types of certifications and whether they are used in domestic, international or both value chains were of interest. This research concentrates mainly on the certifications that are designed for an actor in the upper value chain to monitor their suppliers and the whole value chain. Another goal was to reflect what reasons have led companies to either use private regulation or perhaps not resort to it.

As a result it was concluded that in Finnish pork industry private regulation along the value chain is still rather rare. Quality standards are mostly used by meat companies to monitor their own companies, but not so much the suppliers. Some of the certifications of this research are used in other food sectors, or on some occasion with a foreign supplier or in a company's foreign operations. Retailers on the other hand are more accustomed to using certification schemes in order to monitor their suppliers. The reason why in Finland the emergence of private regulation along the value chain is behind other European countries is possibly due to the slightly stricter legislation, as well as the unofficial regulations that have been set among different parties of the industry. They are relied to more, and perhaps demanding specific third party certificates is not seen relevant at this point.

## KEYWORDS:

Food safety, private regulation, contracting, pork industry.

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# ARVOKETJUN YKSITYINEN SÄÄNTELY SUOMALAISSA SIKATEOLLISUUDESSA

## -KUINKA YKSITYISTÄ SÄÄNTELYÄ KÄYTETÄÄN JA VOITAIISIIN KÄYTTÄÄ LAADUN TAKAAMISEKSI

Tämän tutkimuksen lähtökohta oli esittää suomalaisen sikateollisuuden peruspiirteet, sekä mitä keinoja sillä on kontrolloida elintarviketurvallisuutta lainsäädännön ohella. Asiakkaat sekä liikekumppanit ovat hiljattain ryhtyneet odottamaan korkeampia standardeja hygieniaan, elintarviketurvallisuuteen sekä eläinten hyvinvointiin nähden, ja ovat usein kiinnostuneita siitä riittääkö lainsäädäntö turvaamaan halutun laadun. Tähän tarkoitukseen erilaisia vapaaehtoisia ohjelmia sekä yksityisen sääntelyn sertifikaatteja on ilmaantunut tarjoamaan jälleenmyyjille ja muille ketjun yhtiöille keinon kontrolloida omia toimintojaan sekä arvoketjun muiden toimijoiden kuten tuottajien ja toimittajien toimintoja.

Tutkimuksen tavoite oli selvittää missä määrin suomalaiset lihayhtiöt sekä jälleenmyyjät käyttävät yksityistä sääntelyä tarkkaillakseen toimitusketjujaan sianlihan kohdalla. Myöskin sertifikaattityypit ja se käytetäänkö niitä kotimaassa, kansainvälisesti vai molemmissa oli selvitettävänä. Tämä tutkimus keskittyy lähinnä sertifikaatteihin, jotka on suunniteltu arvoketjun yläpäässä oleville toimijoille, jotka haluavat tarkkailla tuottajiaan sekä toimittajiaan ja koko arvoketjua. Toinen tavoite oli pohtia syitä miksi suomalaiset sianlihan kanssa tekemisissä olevat yhtiöt joko käyttävät yksityistä sääntelyä tai ovat jättäneet käyttämättä..

Tutkimuspäätelmänä oli että yksityisen sääntelyn käyttö suomalaisessa sianlihan arvoketjussa on vielä melko harvinaista. Lihayhtiöt käyttävät laatustandardeja lähinnä omien toimintojensa tarkkailuun, mutta ei juurikaan ketjun muiden toimijoiden. Tällöinkin kyse oli joko ulkomaisesta toimittajasta taikka yrityksen kansainvälisistä toiminnoista. Jälleenmyyjät vaativat tutkimuksessa mainittuja standardeja lähinnä muilta elintarvikealoilta, ja lihateollisuudelle niitä saatetaan suositella. Syy sille, miksi yksityistä sääntelyä ei juuri suomalaisessa sianlihateollisuudessa käytetä, johtuu mahdollisesti muista maita hieman tiukemmasta elintarvikelainsäädännöstä, joka ei ole herättänyt niin vahvoja reaktioita. Suurempi syy on todennäköisesti se, että kotimaisen sianlihateollisuuden pienissä piireissä on totuttu sopimaan asiat keskenään pienemmillä foorumeilla. Tähän epävirallisten toimintatapojen perinteeseen luotetaan siinä määrin, ettei kolmansien osapuolien valvomille sertifikaatioille ole nähty tarvetta.

### ASIASANAT:

Elintarviketurvallisuus, yksityinen sääntely, sopimushallinta, sikateollisuus

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## **LIST OF ABBREVIATIONS (OR) SYMBOLS**

BRC	British Retail Consortium
FAO	Food and Agriculture Organization (United Nations)
ETL	Finnish Food and Drink Industries' Federation
IFS	International Featured Standards
ISO	International Organization for Standardization
LKL	The Finnish Meat Trade Association
MMM	Finnish Ministry of Agriculture and Forestry
SQF	Safe Quality Foods

# 1 RESEARCH HYPOTHESIS, GOALS AND METHODS

I stumbled across this research subject when I received an e-mail from Turku University of Applied Sciences head lecturer Kaisa Sorsa. She needed a student to do some research on the relationship between private regulation and food safety in some specific Finnish food industry sector. This research was meant to gather some information for the use of an EU funded Food Safety project. I was interested due to the fact that I had tried to gather all the possible courses concerning responsibility issues in business. I also had a vague idea of the concept of proactive contracting because we had discussed it briefly during a contract management course.

At the very beginning I was allowed to choose the food industry sector I wanted. I ended up picking pork, because this sector has been in the midst of much heated discussion in the recent years. I thought it would increase the interest factor in this research. It didn't even occur to me that it might also be the source of much difficulty. The first plan for this research was to interview the actors within few entire value chains. That is, the producers, possible middlemen, possible food stuff companies, retailers and maybe other parties involved somewhere in between.

This was the point from which I began compiling material. After a few months I had concluded that my efforts were generating hardly any results. I called or emailed all the food companies, meat wholesales, logistics companies, producers whose contact information I got my hands on to. Some initially answered but after receiving research questions they were not returned. Out of all the bigger meat companies in Finland two responded and asked about the contents of the research, but afterwards commented that there were suspicions of the confidentiality of this research and chose not to participate. The others never replied in any way. Out of the producers I called, many told hesitantly for me to email the questions, but eventually I received no answers. I don't know whether the reason for this is the general suspicion among the industry towards

researches that mention the words 'quality' or 'food safety', or whether it is plainly because a bachelor level thesis is simply not seen particularly interesting to get involved with, or perhaps some other reason.

Afterwards I have thought that the questions may have been written using too much of academic language. I began the research by receiving a more or less ready plan for it, as well as the questions that were expected to be answered. Instead I should have begun from the very beginning to compile my knowledge of the subject and then after some time writing my own questions based on the given material. Despite this, my personal feeling still is that it would have not had much of a difference on the results. And, to quote a few remarks made when I was frustrated, this is a research result of one kind.

The new research plan was to gather a theory base of Finnish pork industry, the reasons why the amount of private regulation schemes have grown so prominently globally, combine these two to explain the situation of private regulation in Finnish pork meat industry and to discuss the reasons why the situation is whatever it is. The main difference between the first and this second version of the research is that instead of having primary data straight from the interviews and actual contracts of certain companies, I would collect the information via other routes and generally from public data found about the companies, their methods of controlling their value chains and the state of private regulation schemes in Finland in general. The research is thus strongly based on secondary, electronic data, as most of the information on companies, authorities and certification schemes and bodies are found from their webpages. The research is qualitative in nature, as the research questions could have not been answered using quantitative methods.

The case selection criteria for this research was rather simple. The pork industry is rather concentrated and small, and generally only the bigger meat companies hold any quality standards. These, and companies that were of the same size and competing on the same markets, were chosen. In effect Atria, Saarioinen, Pouttu, HK Ruokatalo, Snellman and Järvi-Suomen Portti. Also some others are briefly mentioned due to them holding standards, although they

are not of the same size. Retail companies were even easier to pick, as the Finnish food retail market is mostly shared by two groups, S-Group and Kesko.

The thesis tries to answer in two research questions; how is private regulation used in the Finnish pork industry, and why is it used or not used? The purpose was to have an overall glance at the situation within this industry, whether it differs to other areas or sectors, and whether private regulation might be necessary in a market that is becoming more involved with international trade.

## 2 FINNISH PORK INDUSTRY

Finnish pork production decreased by three percents between January and September of 2010 comparing to the previous year (MMM), and Finland was the only EU country in which this was the case (LKL 2010). However, pork still is the most consumed form of meat, and most of it is produced nationally. The production is highly based on contract production between family farms and the sourcing and food companies. The contract obligates both parties to produce and source all the animals during the contract time. The contract can be either of fixed duration or it can be agreed upon for the time being. Mostly the contracts cover the entire production of a farm. (Finnish Competition Authority 2006)

Imported pork is not very often mentioned on the companies' websites but the amount has tripled since 1995 and in 2008 22,1 million kilograms of pork was imported to Finland; that means 11,8% of consumed pork was from abroad. Imported pork is generally meant to supplement the stock of Finnish meat, excluding the companies that are specialized in imported meat products. The imported pork is usually brought from either Sweden or Germany, at times from Denmark, Poland or Belgium. (MMM)

Between 2000 and 2008 the export of pork has almost tripled and in 2008 55 million kilograms of pork were taken abroad. The main exporting country has been Russia, but it has lost its importance recently; in 2008 its share was 34% of the exported Finnish pork. After Russia most of the exported meat is shipped to Sweden, Estonia, South-Korea, New Zealand and Lithuania. (MMM)

According to The Finnish Meat Trade Association, there are approximately 300 meat companies in Finland, out of which 20 companies produce 90% of the gross value (LTL 2005) The industry is very concentrated, and especially pork meat industry is geographically centered in two areas, both around the two largest slaughterhouses in the country. Atria Oy's slaughterhouse in Nurmo is the center for the pork production area of Pohjanmaa and Etelä-Pohjanmaa, just as the slaughterhouse of HK Ruokatalo Oy in Forssa is surrounded by

another important production area which consists of Satakunta and Varsinais-Suomi (MMM).

In the pork value chain several steps and events require the ensurance of process quality and they involve several different actors. Production methods, and animal environment, feeding and health care belong to the responsibility of the producer. Loading, transportation, slaughtering and manufacturing the meat products are in the hands of the sourcing and manufacturing companies. Transporting the finished goods and storing them before they end up to the consumer are the responsibility of the retailer. (ETL 2009)



Figure 1: Pork supply chain

The amount of piggeries have dropped since Finland joined the European Union. In 2008 there were 2500 pig farms, which was 10% less than the previous year. These farms are mainly family farms and are contract suppliers to specific companies. (MMM)

Slaughtering is nationally concentrated on specific hands; 85% of slaughtering happens by cooperative companies, such as Atria, HK Ruokatalo and Järvi-Suomen Portti. The rest 15% is in the hands of private slaughterers; two biggest of them being Saarioinen and Snellman (LKL 2005).

Meat refining can have several meanings. It can be cutting and packing the meat fresh, marinating it or manufacturing refined products such as sausages and cold cuts. Regarding refining, the cooperative and private companies have approximately equal shares. In this research the most prominent ones and their actions concerning food safety and private regulation along the value chain are looked at more closely. (LKL 2005)

In the following charts, an idea is given of the market share proportions in the industry. More recent information was tried to find but in the companies tend to put these figure on their sites only if they happen to have the role of market leader. Also the fact that some of these companies as more specialized in meat, and others in meat products and readymade meals (which is also observed in these tables) and means that when another company may be the market leader in the former, it is a smaller player in the latter, and vice versa. The information is from 2006 according to the Finnish Competition Authority.

<b>The sourcing of pork; company shares in 2006</b>	
<b>A-Tuottajat (Atria)</b>	<b>30-40%</b>
<b>LSO (HK Ruokatalo)</b>	<b>30-50%</b>
<b>Snellman</b>	<b>5-10%</b>
<b>Saarioinen</b>	<b>5-10%</b>
<b>Pouttu</b>	<b>5-10%</b>
<b>Paimion Teurastamo Oy</b>	<b>1-5%</b>

Table 1: Company shares in pork sourcing (2006)

### Sales of meat and refined products; company shares in 2006

	Sales of meat	Sales of refined meat and prepared foods
<b>Atria</b>	15-20%	20-30%
<b>HK Ruokatalo</b>	20-30%	20-30%
<b>Snellman</b>	15-20%	1-5%
<b>Saarioinen</b>	1-5%	15-20%
<b>Järvi-Suomen Portti</b>	5-10%	1-5%

Table 2: Company shares in sales of meat and refined products (2006)

Pork meat finds its way to the consumers through several routes and the retail markets are divided in four sectors; public institutions, hotels, restaurants and catering, grocery shops and others. The share of grocery shops of the meat market is 57% (2005). The consumers choice of where, how and it what form they purchase the meat product often is divided between two needs; to have it as ready and easy as possible or perhaps to be able to prepare the food from scratch and be actively involved (LTL 2005).

Other actors involved in the food safety issues along the value chain are the authorities responsible for the basic food safety level in Finland. Sikava is the Finnish health classification system for piggeries. It has created regulations for the national level of health monitoring, which consists of the very basics of animal health, and the special level of health monitoring, which consists of stricter regulations. The regulations of Sikava are often referred to by the companies in the business. Sikava is run by the Finnish Association for Animal Disease Prevention. Finnish Food Safety Authority Evira is responsible for the food safety in the country concerning all products and processes.

## Finnish Food Safety Administration



Figure 2: Finnish food safety authorities

### 3 PRIVATE REGULATION AND FOOD SAFETY

Several occurrences within the past years have contributed to the rise of different types of private regulation schemes, that are meant to deepen the control over food safety issues and go beyond official legislation. These reasons include the globalization of trade, development of information technology, the changes in regulatory systems after several food safety crisis' and the anxiety of consumers. There is a growing interest among customers and businesses and the changes in their conception of what food safety consists of. These private regulations have also been added to company competence strategies. In addition more global and complex food supply chains, which may cut across several different jurisdictions, have raised the question of how to properly monitor food safety reliably all the way. Especially the emergence of large multinational food retailers has been an important factor in the development (FAO 2010, 6). The most typical form of private regulation are private standards, which are developed and used by food refiners and retailers for a varying set of reasons (Sorsa 2009, 55).

Private regulation can be used for several purposes; to control social responsibility issues, environmental matters, consumer information and so forth (Sorsa 2010, 17), but this research concentrates on the means of private regulation to influence food safety and animal welfare on the side. Many actors, such as Kesko as a food retailer, have invested especially on the social and environmental issues, but food safety and animal welfare are left to less attention (Kesko 2009)

According to the European Commission there are over 440 different private regulation schemes at the moment (Commission notice 2010, 5). Typically they are developed by the private sector and most often by retailers, restaurant chains and at times other actors, such as civil society organizations. The main purpose of these schemes is to address food safety but at times they also offer some differentiation. (FAO 2010, 6)

The standards guarantee that products and/or processes hold specific qualities. A product oriented standard means that the end product is of certain quality or holds specific features. A process oriented standard guarantees that the processes used to achieve the product have been of specific quality. An entire food value chain can be monitored or a part of it (Commission notice 2010, 6). Value chain means the process of certain commodity when it is transformed from raw material to the end product, and each of these phases increase the products value. (Sorsa 2009, 21). Both vertical and horizontal regulation occur but the previous is much more used than the latter. Vertical regulation means the control of a value chain up or downstream, whereas horizontal regulation happens when actors of the same field decide to standardize their processes (Sorsa 2009, 25).

The regulation of a value chain can occur either forwards or backwards, depending on the parties that initiate it. At times consumers can bring forth specific requests or demands regarding a product, for example concerning its ethicalness, to the retailer who then forwards these requests to the subcontractors and the demands then proceed backwards in the chain. Sometimes producers at the beginning of a chain decide to create standards or policies when they see it necessary (Sorsa 2009, 29). This research centers on standards that regulate the chain backwards, as they are more common, and because of the lack of procedures initiated by producers.

The certifications are most often between businesses but some are designed to address the consumer as well; these schemes use specific labeling to inform the customer of the properties of the product or the processes used to achieve it. An important feature of a standard is whether it is monitored by a third party, or whether it is based on a companies own assurance. Certification programs are monitored by third parties (Commission notice 2010, 6 )

A survey conducted by the Food and Agriculture Organization of the United Nations also recognizes three categories among the private standards; they are divided into collective international standards, collective national standards and company specific standards. The collective international standards are

developed for the use of organizations is different countries. The four standards discussed later in this research (GlobalGAP, BRC, IFS and SQF) belong in this group (FAO 2010, 7)

Collective national standards are developed to be used within the boundaries of one country, and the developers are for example national NGO's and industry associations. In Finland there has been no specific standards developed for the use of pork industry, but there are similar activities happening on a more unofficial level via Sikava and the Good Practices of Meat Production. These too are discussed about in this research.

The third classification, company-specific standards, are developed by a company to monitor its supply chain. Some Finnish meat companies have developed similar programs to monitor their suppliers, Snellman has its Best of Farm program and HK Ruokatalo has started designing its Quality Program.

Private standards are useful to different parties in the value chain. For the producers they possibly mean an easier access to markets, they protect the intermediators reputations and give consumers reliable data about the products and production processes. (Commission notice 2010, 5)

In the FAO survey several potential challenges were reported as well. The question of whether these private schemes might undermine the authority of public food safety regimens was raised, as well as the question of transparency. Many of these schemes involve key stakeholders in decision making positions. The schemes may as well have a radical impact on the access of many actors to the markets; although they are voluntary, they may become unofficially obligatory when they are required by possible business partners. Also the possibility of multiple certifications and their cost was of concern, and the multiplicity of different schemes and legislative requirements. Special problems might occur when dealing with developing countries, as they likely have less means and possibilities to commit to such schemes (FAO 2010, 8)

## 4 METHODS OF REGULATION

### 4.1 Public Law

The food safety and quality of pork production and the welfare of the animals is firsthand regulated by the legislation. They are the only forms of regulations that are compulsory for producers and other actors in the chain. In Finland two legislations are considered, the Finnish and the EU food safety legislation. The EU food legislation has been shaped to be strict in global comparison regarding the basic requirements for production (Sorsa 2009, 54). In general it can be noted that the Finnish national regulation system is somewhat stricter, especially concerning animal welfare. However it too is often seen not to go far enough to ensure quality and animal welfare, giving a reason for the growing interest in further regulations and the industry's own recommendations (The Good Practices of Pork Production)

The Finnish food safety legislation sets the basic rules of the industry. Concerning pork production, it clarifies the minimum requirements for the surroundings and treatment of the animal to ensure a healthy pig. Farms and companies involved with food processing are required a quality management system, the meat products must be traceable at least to a certain point, the recording, documents and markings need to be up to date. Imported meat products must pass certain sample tests, for example salmonella. An actor within the food industry must notify the authorities immediately whenever problems or threats are detected within the system. The legislation distributes the responsibility areas for each authority; the Ministry of Agriculture and Forestry, the Finnish Food Safety Authority Evira and the authorities at regional and municipal level. The legislation obviously includes the punitive actions with which any violations are responded to.

Regarding animal welfare the legislation includes the very minimum or requirements which is why different schemes have taken shape to go further than the law in order to ensure the healthiness of the living animals as well as the end product. The legislation sets minimum regulations for the spaces in

which the pigs are held; how big they should be and with what surroundings, how many animals can be kept in one place and what sort of individuals, what type of equipment is allowed and so on. Some very specific regulations are set, for example in Finland the amputation of a pig's tail is forbidden, grinding the canine teeth of the animals is not allowed to be done systematically (only if it is specifically required for safety). Breeding and gene manipulation is forbidden if it causes the animals any suffering. (Evira 2009)

In HK Ruokatalo's table of pork production requirements within EU level, Finnish national level, HK's new turnip rape fed pig and organically produced pig, some differences can be noticed. In some points the legislations are in accordance with each other; both require 0,65 m<sup>2</sup> of space per pig with no specifications of the quality of the ground, stimulation is offered to the animals less than twice a day, there are no requirements for outings, hormones are not allowed in either and the carcasses need to be traceable until the cutting. The differences between EU and national level are that EU allows artificial lighting whereas in Finland natural light is used, in EU the caretaker has to visit daily when in Finland the visits happen regularly each day and a diary is kept, in EU there are no requirements for the feed when in Finland it has to be at least 85% domestic, in EU there are no requirements of yearly vet visits but in Finland there has to be 3 or 4 each year, in EU medication is allowed but in Finland no precautionary antibiotics are permitted, in EU amputating tails is partly allowed but forbidden in Finland entirely. In the European legislation the minimum transportation time to slaughter is 24 hours without breaks, in Finland the average time is 4 to 5 hours, but the maximum is 24 hours as well (HK Ruokatalo).

On the EU level the contents of health inspections and documentation is scheduled to be improved on the basis of the Welfare Quality program, which was held between 2004-2009. It was funded by the Commission and the goal was to develop means to evaluate the welfare of livestock and also a standard concerning them. In the future the results of this program are meant to be used when reforming the EU legislation. (Ruokatieto 2010)

The Finnish food safety legislation tends to concentrate more on the food product safety rather than the welfare of animals, which should be of paramount importance with considering the quality of food. It is also gaining more interest among the consumers. The requirements for the treatment of animals should stop any blatant violations against the animal welfare, but they still are rather vague on certain points, leaving some room for maneuvering. Comparing it to the minimum requirements around the European Union, it is clear however that the Finnish requirements are stricter and it may partly explain why elsewhere there has been more of an urge to develop private regulation schemes but in Finland these ideas still work on a rather unofficial basis.

It is set in the Finnish food safety legislation that the companies involved with producing or handling food products need to have a quality management program to minimize any risks. HACCP is an abbreviation for Hazard Analysis and Critical Control Points. It is a quality management system developed to help organizations to aim their quality management efforts to the most relevant issues. The goal is to ensure that faulty or dangerous products do not reach the consumer. The system is used to recognize the critical points in the process which might pose a health risk.

The first versions of HACCP came around in the 60's and in 1993 it was included in the legislation in the EU area, in Finland it has been required from companies that handle products of animal origin since 1995. HACCP is one of the most important tools used to ensure food safety and often included in other certifications, such as ISO 22000:2005 or BRC Food.

The use of HACCP requires a wide knowledge of the organizations activities, and at times the assistance of outsiders. The process begins when a certain group of people within the organizations are chosen to go through a training and then plan and carry out the system.

The group compiles product descriptions which include all its features and details from the exact contents to the intended consumers. According to the information each products way from production to retail to consumer is drawn

out in a chart. These charts are used to develop an HACCP program by following the seven principles. The principles are to analyze the hazards along the way, to determine the critical control points which are essential regarding food safety, to establish critical limits, to monitor the critical points, to establish corrective action, to keep a record and to verify it. HACCP is a tool included in other standards, rather than being one itself. (Evira)

#### 4.2 Pork production regulations set by Sikava

The minimum regulations to which a pig farms or other actors within pork value chains must conform to are explained in the national and EU legislation. This is rarely seen sufficient and Sikava has created a brief set of regulations that are named as the requirements for *responsible* production of pork. These regulations are often referred to by the sourcing and refinery companies in order to explain their expectations of the quality and food safety level. Belonging to Sikava is voluntary but all the Finnish pig farms do, it is that imbedded to the system and what is seen proper.

The Sikava regulations expect the farm to have a health agreement with a vet, a yearly updated health plan written by the vet and also receive a certain amount of visits by the vet during a time period. The farm has to follow up the numbers of animals and mortality rates as well as feed possible drug use information in Sikava's medical records. Breeding farms have particular requirements for different animal disease testings. If the farm falls to national level due to missing three consecutive vet inspections, it has to fill the joining requirements and give out relevant samples again. (Sikava)

Last year meat companies wanted to go on developing the welfare of pigs and they defined indicators with which they can together monitor the welfare of pigs on supplier farms. Slaughteries are to follow up the indicators and if any alarming is noticed they contact the producer. If the situation is not corrected within 12 months, the contract between the meat company and producer is terminated. Together with these indicators it was decided that the vet

inspections that are part of the Sikava program, begin to pay more attention on the other aspects of animal welfare besides the actual health. These aspects include feeding, environment and behaviour. The new inspections were scheduled to start at the beginning of 2011. (Ruokatieto 2010)

#### 4.3 The Good Practices of pork production in Finland

In Finland it tends to be customary to rely on the suppliers and other partners to follow the so called good practices of pork (or any food) production. This may be a reason why there has not been similar tendency to turn to private regulation schemes in order to ensure quality in value chain as there has been in some other countries. The good practices of meat production are essentially a collection of Finnish food legislation decrees and recommendations agreed upon unofficially within the industry. The practices include both the actions the fulfill the legislation as well as the actions that go beyond the law.

The practices were collected on behalf of the Finnish Association of Meat Industry. The members of the association are Atria Suomi Oy, HKScan Oyj, Järvi-Suomen Portti, Kotivara Oy, Lapin Liha Oy, Liha-Saarioinen Oy and the Finnish Meat Trade Association (whose members are smaller meat companies). The purpose of the collected practices was to inform the consumer of the essential practices used in the meat industry and to strengthen their trust on Finnish meat products.

The good practices include recommendations for all the steps in value chains, from production to animal transportation, slaughter, manufacturing and retail market. These practices can be found by any individual from the internet as they are published by the Finnish Food and Drink Industries' Federation. They can be at times seen referred to in the websites of food companies to showcase the requirements they have for their suppliers. There are no specific ways of enforcement however, and each actor is in charge of the monitoring itself and the others (ETL 2009)

#### 4.4 Private regulation of pork production

Internationally there are plenty of different private standards and certifications, either general or meant for the use of food industry or specific actors along food chains, to control and demonstrate the actors' ability to produce safe quality products for the consumers. The purpose of these standards is to help the organization to manage its food safety issues and to assure the customers, actors within food chain and other interested parties of the quality of the products and services. The range of food safety standards is wide and some of them are overlapping.

In this chapter I will concentrate on those that are more wide spread in Europe and which are offered by at least one certification body operating in Finland. Some of the following standards might not be used in Finland yet despite their availability but they are included because some might be important when entering certain market areas and thus worth considering.

All of these standards are granted by third parties, which also perform the auditing. I have tried to give the general contents of each standard and according the availability of information to describe the guidelines by which these standards are enforced; who are the dominating parties, what happens in the case of nonconformity and whether there are possible sanctions. It is impossible to say whether these things are mentioned in contracts between food chain actors or how they are referred to, because I had no access to any contracts or had any interviewees. The contents of the standard guidelines do give out an idea how they might be included.

##### 4.4.1 Standards

In this chapter a few third party certifications are listed. They are either used in Finland by companies involved in pork value chains, or they are at least available from certification bodies that operate in Finland. The main difference between the ISO standards and the rest is that ISO is designed for companies

to help them monitor their own operations. The rest, BRC, GlobalGAP, IFS and SQF, are developed mainly by retailers to help actors in the value chain downstream to control their suppliers.

### **International Organization for Standardization**

International Organization for Standardization is the largest developer and publisher of standards in the world. It is a non-governmental organization and in practice it is a network of national standards institutes which locate in 160 countries. The Central Secretariat of ISO is located in Geneva, Switzerland. ISO has developed a range of standards for governments, society and different fields of industry. Regarding food industry, ISO has three relevant standards which are also used in Finland by several meat product companies. These standards are ISO 22000:2005, ISO 9001:2008 and ISO 14001:2004.

ISO 22000:2005 specifies the requirements for food safety management system and it is one of the most prominent food safety standards. It can be applied to organizations at all stages of a food chain which need to demonstrate their ability to control food safety hazards. According to ISO website ISO 22000:2005 specifies seven requirements for an organization. It is expected to plan, implement, operate, maintain and update a food safety management system to ensure providing products which are safe for the consumer, to demonstrate compliance with applicable statutory and regulatory food safety requirements, to enhance customer satisfaction by evaluating customer requirements regarding food safety and demonstrate conformity with them, to communicate food safety issues to suppliers, customers and other relevant parties in the chain, to ensure the organizations conformity to the food safety policy and the ability to demonstrate it to relevant parties and to seek certification of the food safety management system by an external organization or make a self-assessment or self-declaration of conformity to ISO 22000:2005.

ISO 9001:2008 is specifies the requirements for an organizations quality management system. The organization has to demonstrate its ability to provide

products that meet the requests of customers and other relevant parties, and it is meant to enhance customer satisfaction. The organization should effectively use this system while also improving it constantly and assure the customers that the requirements are met. The requirements of ISO 9001:2008 are generic and as such applicable to any organization and industry. If it includes requirements that cannot be applied for specific organization, they are excluded. There are certain limitations to these exclusions however, and they cannot hinder the quality management system.

A third standard often used by meat companies, among others, is ISO 14001:2004, but it concerns environmental management systems and thus does not directly relate to food safety issues. (International Organization for Standardization)

### **British Retail Consortium (BRC)**

British Retail Consortium created the BRC Food Technical Standard in 1998 due to an existing demand within the food industry. It is designed specifically for the retailers and brand owner's needs to evaluate the products of their manufacturers and ensure their safety. In EU law the retailers and brand owners have the legal responsibility for the products they sell, so the importance of evaluation is evident. This standard is an example of one that can be used vertically within a food chain to control the quality of supplier products. It is essential when operating in the United Kingdom, but it has become more used within other EU countries and North America as well so it has evolved into a Global Standard. BRC is internationally used by British retail companies such as Tesco and Sainsburys and for example Burger King expects its suppliers to apply to the requirements. Later on BRC developed also other standards; regarding food industry BRC Packaging Standard is also used and usually closely connected to the food standard.

The differences between getting a BRC Certification and using standard supplier inspections are demonstrated with a table comparing the services each

ensures. BRC is a published standard with a clear set of requirements, it ensures a full audit of the site before certification, action taken on non conformities are included in the audit report and all conformities are completed and checked by the audit company. The certificate has an expiry date and the contract between audit company and the site holds for that duration. Certification can be suspended or withdrawn if the requirements are not met later on and there is a continuous dialogue between sites and the audit company.

In the case of regular site inspections, they do mostly have specific standards which need to be met and a full audit is conducted upon certifying the site but the reports do not usually include action for the nonconformities and they may not be completed and checked by anyone. The certifications do not have expiry dates, there are no punitive actions if the requirements are not met nor is there any continuous dialogue between the parties.

This tends to be one of the advantages of third party certification. When it is someones explicit job to ensure all the requirements are fulfilled, the retailer need not worry about the tasks involved. The audits may be more thorough and action is taken if nonconformities are met. (British Retail Consortium)

### **International Featured Standards (IFS)**

International Featured Standards is a non-profit company and its standards are similar to those of British Retail Consortium. They serve the same purpose; to ensure the safety of companies' own brands and the products sold under them. It offers means to control the quality of supplier products. Just as BRC standards, IFS standards are offered in most certification bodies in Finland. They are often mentioned together to accentuate the similarities and that either one of them covers the same issues.

Regarding food industry International Featured Standards offer IFS Food, which is aimed at companies which either process food or pack loose food products.

The current version of IFS Food includes 250 requirements, which are divided into five sections. These five chapters deal with Senior Management Responsibility, Quality Management System (HACCP system among other issues), Resource Management, Production Process and Measurements. (International Featured Standards). Whereas BRC is important to anyone looking out to the British markets, IFS is particularly relevant for example to German, French, Italian, Spanish and Polish markets (Bureau Veritas).

### **GlobalGAP**

Global Good Agricultural Practice (previously EUREPG.A.P.) was developed to as a response to the growing challenges within food industry. It is a private sector body that sets voluntary standards for all actors in agriculture. GlobalGAP standards are granted by over a hundred bodies around the world, in Finland by Bureau Veritas. Within the selection of standards especially the Integrated Farm Assurance (IFA) Version 4 is aimed towards livestock production (among other fields) and it includes a Pig Certification. To apply for a standard for each product, a set of documents need to be acquired and the requirements need to be conformed to at all times.

At the beginning evaluations are performed by both the producer itself and also externally by the certification body. After this inspections are carried out annually by the certification body, either announced beforehand or unannounced. The CB will go through the entire check list while inspecting.

The GlobalGAP regulations include three types of non-compliance and non-conformity. Non-compliance of a control point means that a control point on the check list is not fulfilled according to criteria. Non-conformance means the infringement of a rule that is essential to obtain certification. Contractual non-conformance is a breach of any of signed agreements in the contract between the producer and the certification body. The GlobalGAP included three types of criteria; Major Musts, Minor Musts and Recommendations. Major Musts require

100% compliance of its control points, Minor Musts require 95% and Recommendations have not percentage of compliance.

In a case of non-conformance, the certification body that has granted the certificate will sanction the producer accordingly. The producer cannot change the certification body until the non-conformance is closed out, and no other certification body can lift the sanction. Three kinds of sanctions are used; warnings, suspensions of products and cancellations.

Warnings are issued for all types of non-conformances and they can be issued during the initial inspection before granting the certificate as well during the annual inspections. If the warning is given during an initial inspection, the issue needs to be resolved within three months. If not, a complete inspection needs to be performed. If a non-conformance is detected in the later inspections and the warning is given they should be closed within 28 days. Concerning non-conformities against Major Musts, period given will depend on the criticality of the issue and no time is given for compliance if there is a serious threat against people, the environment and consumer. In this case, suspension is issued immediately. With food safety issues, the period of compliance is shorter than the usual 28 days. If the problem is not solved during the period given, a suspension is issued.

A suspension can be imposed on any amount of products that are certified and the entire product must be suspended. During the suspension period, the producer may not use the GlobalGAP trademark or anything related to it. When the non-conformance is resolved within the given time period and is proved satisfactorily, the suspension can be lifted. If this is not done within the given time, a product cancellation is issued.

The contract will be cancelled in three occasions; If there is a fraud or lack of trust to comply with the GlobalGAP regulations involved, if corrective action has not been undertaken after product suspension or if a contractual non-conformance has occurred. After cancellation the producer cannot use the

GlobalGAP trademark or anything related, and they cannot apply a certificate for 12 months after the cancellation.

The mentioned sanctions apply to producers, but GlobalGAP also reserve the right to sanction certification bodies in case they do not follow procedures accordingly. (GlobalGap)

### **Safe Quality Food (SQF)**

Safe Quality Food Program offers different standards for primary producers and manufacturers/distributors; SQF 1000 for the first and SQF 2000 for the latter. Both of them are based on the HACCP risk management system and their goal is to provide the producers and manufacturers help with meeting product trace, regulatory, food safety and commercial quality criteria. The suppliers commit themselves to produce safe and quality products and to comply with the certification and legislative requirements. Safe Quality Food is similar to the other certifications. It is relevant especially if targeted North American, Pacific and Asian markets (Bureau Veritas).

#### 4.4.2 Certification bodies in Finland

In Finland before mentioned standards and certifications are granted by six certification bodies, out of which five grant them for food industry organizations. These five bodies include Bureau Veritas, SGS, Det Norske Veritas, Inspecta Sertifiointi Oy and Lloyds Register Quality Assurance Limited. They are the third parties that perform the actual monitoring and audits of suppliers on behalf of the organization. Some of the bodies offer many different certifications, some have more limited selection. Finnish meat companies are strongly accumulated to few of these bodies, while there are none on others listings.

## **Bureau Veritas**

Bureau Veritas grants all three ISO standards mentioned earlier, as well as HACCP, BRC, IFS and Global G.A.P. It is the only body in Finland to grant the latter. From Finnish meat companies BV has granted standards to Pouttu, which holds ISO 22000:2005 and ISO 14001:2004, and Lapin Liha Oy which holds ISO 9001:2008. (Bureau Veritas)

## **SGS**

SGS is the biggest inspection, verification, testing and certification company in the world. It's headquarters is located in Geneva and it offers its services in ten different industry segments, also including food industry in the agricultural services. For the use of food chains SGS offers the ISO standards in different packages, HACCP either included in the ISO standards or separate, GMB, BRC and IFS. In Finland SGS is a notable source for certifications, but within Finnish meat industry it has not granted any. (SGS)

## **Det Norske Veritas**

Established in Norway 1864, Det Norske Veritas is one of the certification bodies operating in Finland. Food industry is one of four biggest fields in which DNV is concentrated on and it grants ISO standards, HACCP, BRC, IFS and QS. Among Finnish companies which are involved in meat processing, it has given ISO 22000:2005 standard to HK Ruokatalo Oy and meat wholesale company Harri Tamminen Oy. (Det Norske Veritas)

## **Inspecta**

Inspecta Seritifiointi Oy is a Finnish certification body and the leading one in the country. Its certification selection is narrower than with the other bodies; its

popularity is most likely explained by it being the only wholly Finnish certification body. Food companies are not using a wide range of certifications, so the selection of options is not relevant. Within food industry sector Inspecta grants ISO and BRC certifications. To Atria Suomi Oy and Oy Snellman Ab it has granted ISO 22000:2005, 9001:2008 and 14001:2004, to Saarioinen ISO 9001:2008 and ISO 14001:2004 and to meat wholesale Veijo Votkin Oy ISO 22000:2005 and ISO 14001:2004. (Inspecta Sertifiointi Oy)

## LRQA

Lloyd's Register Quality Assurance Limited is among the world's largest certification bodies. In Finland it grants several standards concerning food safety. These include ISO 22000:2005, PAS 220, FSSC 22000, IFS and both BRC Food and Packaging. LRQA has certified food companies in Finland but not any on meat sector. (Lloyd's Register Quality Assurance)

### Certification bodies in Finland offering standards for food industry

	BV	SGS	DNV	Inspecta	LRQA
ISO 22000:2005	X	X	X	X	X
ISO 9001:2008	X	X	X	X	
BRC Food	X	X	X	X	X
BRC Packaging	X	X	X	X	X
IFS	X	X	X		X
Global G.A.P.	X				
SQF	X				
GMP	X	X			
PAS 220					X
FSSC 22000	X	X	X		X

Table 3: Certification bodies offering food safety standards in Finland

Finnish meat companies and the certifications they hold					
	BV	SGS	DNV	Inspecta	LRQA
Pouttu Oy	ISO 22000:2005, ISO 14001:2004				
Lapin Liha Oy	ISO 9001:2008				
HK Ruokatalo Oy			ISO 22000:2005		
Harri Tamminen Oy			ISO 22000:2005		
Atria Suomi Oy				ISO 22000:2005, ISO 9001:2008, ISO 14001:2004	
Atria Skandinavia				BRC	
Oy Snellman Ab				ISO 22000:2005, ISO 9001:2008 ISO 14001:2004	
Saarioinen				ISO 9001:2008, ISO 14001:2004	
Veijo Votkin Oy				ISO 22000:2005, 14001:2004	

Table 4: Finnish meat companies and the certifications they hold

#### 4.5 Quality programs of food companies

Few Finnish food companies have developed their own quality programs to control the safety and quality of the processes and products. These programs are one way to have control towards the suppliers.

##### **Snellman: Maatilan Parhaat**

Oy Snellman Ab is one of the largest meat product companies in Finland and it has 2100 family farms as partners in primary production. It has developed a quality program called Maatilan Parhaat (Best of the Farm) for its pork and beef production. The goal is to ensure the good relationship between the company and its meat producers and other partners, and to develop product quality,

breeding methods, relationship to the environment and profitability of production. Snellman emphasizes the importance of happy family farms as a type of guarantee for quality meat. According the Snellman webpage, the program includes monitoring of the essential phases of production and their appropriate documentation. It does not specify the tools used other than the farms need to fulfill the animal healthcare requirements set by Sikava and Naseva. (Oy Snellmab Ab)

### **HK Quality Program**

HK Ruokatalo Oy attains its livestock through its sourcing company HK Agri from the primary production. HK and HK Agri have decided to create their own quality assurance program in addition to their involvement in other projects. The goal of this program would be to ensure the welfare of the animals and the environment better than before. This was the only information available so far. (HK Ruokatalo)

## 5 CASE EXAMPLES

In this chapter some of the actors within pork meat industry are looked at more closely regarding the activities with which they are tackling the food safety issues.

### 5.1 Meat companies

In Finland big meat companies such as Saarioinen, HK Ruokatalo, Atria, Pouttu and Snellman do not tend to mention any private standard requirements for their suppliers on the websites. They themselves use only ISO standards, mostly ISO 22000, the exception being Atria which uses BRC Food in its Scandinavian operations to monitor their suppliers, not in Finland however. The companies' supplier contracts were not available for this research but the following descriptions were found publicly.

Saarioinen controls its risks by “choosing raw materials carefully, instructions, process assessments, specifications and other monitoring measures”. The risk management methods are listed in a quality management plan supervised by authorities. The company generally slaughters its livestock itself and buys them mostly from Finnish farms. The meat production is “mainly” based on contracting, so the material is traceable. Foreign meat is usually turkey and lamb and in 2009 96% of all meat was Finnish. At times pork meat is brought from abroad if the market demand is high. Pork meat producers commit to maintaining a healthy environment at their production facilities in their supplier contracts, but specifics are left out. The livestock suppliers and their ability to produce quality products are inspected on site and all shipments are checked. These check-ups include sensory evaluation and samples. Each employee is responsible for their work and perform their own measurements and record them.

Saarioinen follows four quality principles; tasty and safe products, transparency and trustworthiness, committed staff and continuous development. It has received a quality management certification in 1996; the certification is

unnamed but presumably ISO 22000 which is mentioned elsewhere. (Saarioinen Oy)

Snellman ensures the quality of its products with its already mentioned network of family farms and its Maatilan Parhaat program. Pig farms have to fulfill the health requirements of Sikava. The company holds ISO 9001, ISO 14001 and ISO 22000 certifications which have been granted by Inspecta Sertifionti Oy. Inspecta also conducts an external audit. (Oy Snellman Ab)

Atria has based its quality management on the HACCP procedures which include the material, production processes and distribution chains. Regular audits are performed to ensure that up-to-date legislation, standards and requirements of international trade are followed. Atria also has its Safe Atria Quality program and its purpose is to assure that its product safety measures are followed throughout the operations of a large multinational company. Besides Finland, Atria also operates in the Baltic area, Scandinavia and Russia. Each area has some differences regarding food safety certifications. In Finland and the Baltic area it follows ISO 22000. Russia has its own specific standards, Atria has GOST R 51705 1-2001 and it also follows the statute of European Commission regarding food hygiene. Atria Scandinavia on the other hand holds the BRC Global Standard and The IKEA Way on Purchasing Food. (Atria Suomi Oyj)

Pouttu Oy explains on its site that it follows the legislation accordingly as well as authority instructions. The staff is trained and internal audits are conducted to ensure that the policies are followed. It also purchases only safe and qualified products, but there are no specifications how the suppliers are monitored. Pouttu holds ISO 14001 and ISO 22000, which it has received from Bureau Veritas. (Pouttu Oy)

Järvi-Suomen Portti uses mainly Finnish meat (generally 98% of all meat) produced by the members of its cooperative society and they are supplied by HK Agri and possibly other distributors (Järvi-Suomen Portti Oy). There is no mention of any private standards on Portti's website, nor is it mentioned on any

of the certification bodies sites. Assumably the quality requirements of HK Agri apply similarly to Järvi-Suomen Portti as they do to HK Ruokatalo.

HK Ruokatalo Oy is one of the major food companies in Finland and it is very closely linked to its logistics company HK Agri, previously known as LSO Foods. The production facilities of HK are approved by EU and the facilities for pork production are approved by the United States Department of Agriculture. Production facilities in Vantaa, Forssa, Mellilä and Säkylä have been certified with ISO 22000. In Eura and Outokumpu the same certification was due in autumn 2010. Risk management is handled either with support schemes or using the HACCP system. The quality management systems of each production facilities go beyond what is set in the legislation and also the laboratories within the facilities are accredited.

HK acquires most of its meat from Finnish contract suppliers; the company has 6000 pork and beef suppliers in the country. Some of the company's products are made in Sweden from Swedish meat, but the same quality criteria apply across the bay. Products consisting entirely Finnish meat are branded with the Blue Swann label.

With fresh meat, the packages are marked with information on where the meat has been produced, slaughtered and cut. With processed meat products the Blue Swann label is used to indicate completely Finnish origin. (HK Ruokatalo Oy)

HK Agri handles the meat sourcing for HK Ruokatalo, and also Järvi-Suomen Portti. It holds its own ISO 9001 standard. About pork production it is stated on the website that a vet makes inspections on the supplier farms four times per year and also makes a yearly updated health plan. Basically the supplier farms thus follow the regulations set by Sikava. The supplier contracts are briefly mentioned, but only on regarding competitiveness, financial profits, production capacity and so on. No specific demands regarding quality are mentioned. (HK Agri)

## 5.2 Retailers

INEX Partners is a subsidiary company of S Group, a sourcing and logistics company mostly responsible of the grocery good supplies of a group that holds 42 percent share in Finnish grocery market. INEX Partners have enclosed an entire attachment concerning quality in its supplier contracts. It demands the suppliers to comply with its requirements for suppliers and products. Within the contract the Finnish and EU legislation are referred to, and the supplier is expected to be liable for the compliance to them at any time and keep up with the changes in legislation.

Regarding food supplies, INEX expects HACCP to be followed. It also demands GAP principles to be followed in the cultivation of fruits and vegetables, but not in livestock production. INEX approves the following quality management systems: BRC, CCvD-HACCP, IFS and SQF 2000. Other approved standards mentioned in the contract are EFSIS, DS 3027 and ISO 22000/ISO 9001, the latter being the most used standard of the Finnish meat producers. INEX does not however demand any of these certificates, but they are taken into account when choosing a supplier.

In case INEX asks for it, the suppliers have to be able to present satisfactory documentation of product safety and quality insurance. INEX representatives have the right to perform inspections and audits on the production facilities and any other facilities where the products are either handled or stored. If any anomalies are detected during the inspections, further analysis can be carried out in an accredited laboratory in the suppliers expense.

Regarding animal origin products, INEX has some specific notes included in the contract. It does not approve any parts of cloned animals, unless it is specifically agreed upon and in writing. Animal testing INEX approves of only if it is the only option and used to enhance human safety. The products must be traceable and INEX does not approve of the use of antibiotics in animal production and processing. The products must be tested for any pathogenic

microbes and all shipments must include a document that it doesn't carry salmonella.

Within its contracts INEX does pay attention to the quality of their supplier products, and it mentions the requirements of national and EU legislation, as well as the compulsory HACCP quality management tool. Any other certificates and standards are voluntary and the encouragement to use any of them based on possible competitive advantage over other suppliers. The company mentions its right to carry out inspections and audits but does not specify them in any way, for example how often those may occur. Also, nothing is mentioned over possible sanctions or other actions in the case of non-conformity. If the supplier has one of the quality standards listed earlier, they would also comply with the regulations included in them. They would be inspected by the certification bodies and most likely be sanctioned according to the policies of each standard. The INEX contract does not imply would anything happen from their part in this case, or would for example the cancellation of a certificate affect the supplier relationship in any way as they are not compulsory to begin with.

Kesko is the other of Finland's two big retailer groups; it holds 34,2% (2009) of the food retail market with its chain of K-markets. K-markets also are the only supermarkets that still operate on the traditional storekeeper system in which there is someone responsible for the functions of a single store. In Kesko's responsibility report the corporation states that it is dedicated to auditing its suppliers regarding social responsibility such as working conditions, salaries, health care as well as environment. It uses SA8000 certifications and BSCI auditing with a growing number of suppliers to control and enforce its standards on social responsibility. Regarding food suppliers, 96,5% of the company's foreign fruit and vegetable suppliers hold GlobalGAP standard. Meat products mainly come from within the country's boundaries and most of the time via refineries and other processing companies, so there's probably no direct contacts to producers as there can be to fruit and vegetable suppliers. There is no mentioning of any specific surveillance of the Finnish meat value chain. It is

highly likely based on the trust on the partners and the quality of Finnish meat and its production process overall. (Kesko)

## 6 CONCLUSIONS

In the recent years there has occurred an emergence of varying private regulation schemes and voluntary programs as a response to changes in international trade, complexity of food supply chains, consumer conceptions and preferences and an increase in global food crisis'. Also an interest on the animal welfare has grown. These schemes have been developed by many actors within the chain, and even outside it, but most prominent have been the retailer driven standards which have been created to monitor the suppliers in the value chain.

On the side of this international development, the Finnish pork industry has made some of its own. Finnish meat production and especially that of pork has traditionally been domestic. Food safety in Finland has been generally very good comparing to different crisis' in other countries, but the Finnish food safety legislation does not go very far to determine the minimum conditions of livestock. It is the animal welfare that has been in the centre of critique and discussion recently, and this is where the industry has had to take some stance on.

The industry is rather concentrated and the circles are small enough to allow a lot of unofficial activities and decision making regarding food safety and quality. The actors in the pork value chain have developed means to go beyond legislation to ensure food safety and animal welfare. All Finnish pork producers belong to Sikava and the good practices of pork production have been determined by the Finnish Association of Meat Industry.

Possibly due to these customs agreed upon within the industry there has not been similar rise of private regulation schemes. The biggest meat companies use ISO standards to control their own operations and ensure the quality of their processes, but there was no sign of any certifications used to control the value chain in Finland. Moreover, there hasn't been an emergence of Finnish certification systems in the style of GlobalGAP or BRC, or even the kind of

collective national standards there are in other countries that would be verified by third parties.

Some meat companies have developed, or are developing, their own quality programs to monitor their suppliers. Snellman has opted to invest in its relationships with the family farms that supply their meat, convinced that this is an important way to ensure a functional value chain.

In this research two sourcing/retail companies were looked at. Inex Partners includes its supplier contracts with a quality appendix in which it states its requirements of quality. It has listed several private regulation schemes which it accepts. They are not obligatory but it is mentioned that they give a competitive advantage to a potential supplier. This way retailers may promote the use of standardization via contracting. Kesko has many quality programs brought up in their responsibility report, but generally they revolve around social responsibility and not food safety, at least regarding pork or other meat products.

Although companies emphasize the domestic pork meat, the importing of pork has increased. It has tripled since 1995, and in 2008 11,8% of pork was foreign. A thing to consider for the industry is how to monitor the quality and safety of the imported meat products and their production processes, as the good practices, Sikava and other domestic means do not apply here. For example Atria holds a BRC standard in its Scandinavian operations. It is not used domestically. GlobalGAP for example is already required from many foreign and domestic fruit and vegetable suppliers. This sector needs to lean more on foreign suppliers than the meat sector has had to however.

The final conclusion is that the Finnish pork industry does not use private regulation schemes to the same amount as they may be used abroad or with other food sectors. Possible explanation is that the industry is rather small and concentrated, the supply chains are still mainly domestic and the regulations that go beyond legislation are agreed upon in trade associations and other forums and the responsibility is left generally on the companies themselves instead of having third parties involved in the monitoring. Exceptions may be

made if foreign parties are involved in supply chains. Considering that the importing of pork is on the rise, it may be a trend in the future.

## SOURCE MATERIAL

Atria. Referred 22.3.2011. <http://www.atria.fi>

British Retail Consortium. Referred 22.3.2011. <http://www.brcglobalstandards.com>

Bureau Veritas. Referred 22.3.2011. <http://www.bureauveritas.com>

Det Norske Veritas. Referred 22.3.2011. <http://www.dnv.fi>

Elintarvikelaki 23.1.2006

Elintarviketeollisuusliitto ry. 2009. Lihantuotannon hyvät toimintatavat – Sikaketju. Referred 22.3.2011. <http://www.etl.fi> > Julkaisut

Euroopan unionin virallinen lehti. 2010. Komission tiedonanto – EU:n suuntaviivat maataloustuotteiden ja elintarvikkeiden vapaaehtoisia sertifiointiohjelmia koskevista parhaista käytännöistä.

Evira. 2009. Tavoitteena terve ja hyvinvoiva sika. Referred 31.1.2011. <http://www.evira.fi> > Julkaisut > Eläimet > Esitteet > Tavoitteena terve ja hyvinvoiva sika.

Evira. HACCP-järjestelmä. Referred 22.3.2011 <http://www.evira.fi> > Elintarvikkeet > Hygieniaosaaminen > Tietopaketti > HACCP

FAO. 2010. Draft report on a global global survey on private standards, codes of conduct and guidelines in the livestock sector. Working document.

GlobalGAP. Referred 22.3.2011. <http://www.globalgap.org>

HK Agri. Referred 22.3.2011. <http://www.hkagri.fi>

HK Ruokatalo Oy. Referred 22.3.2011. <http://www.tiesydameen.fi>

HK Ruokatalo. 2011. HK Rypsiporsas. Referred 22.3.2011. <http://www.tiesydameen.fi> > Vastuullinen HK > Rypsiporsas > Rypsiporsas tulee kotitalta > Vastuullisen tuotannon mittarit

Inex Partners. 2009. Laatuliite. Referred 22.3.2011. <http://www.inex.fi> > Yritys > Tavarantoimittajaksi? > Laatuliitteeseen tästä

Inspecta Finland. Referred 22.3.2011. <http://www.inspecta.fi>

International Featured Standards. Referred 22.3.2011. <http://www.ifs-certification.com>

International Organization for Standardization. Referred 22.3.2011. <http://www.iso.org>

Järvi-Suomen Portti Oy. Referred 22.3.2011. <http://www.jarvisuomenportti.fi>

Kesko. 2009. Keskon yhteiskuntavastuun raportti 2009. Referred 22.3.2011. <http://www.kesko.fi> > Vastuullisuus > Raportit

Kilpailuvirasto. 2006. Yrityskaupan hyväksyminen: LSO Foods Oy/Järvi-Suomen Portti Osuuskunnan sika- ja nautateuraseläinten hankintaliiketoiminta. Referred 22.3.2011. <http://www.kilpailuvirasto.fi> > Yrityskauppavalvonta > Yrityskaupparatkaisut > 2006 > LSO Foods Oy, Järvi-Suomen Portti

Lihakeskusliitto. 2005. Liha-alan ABC. Referred 7.3.2011. <http://www.lihakeskusliitto.fi> > Lihalehti > Tietoa lihasta > Liha-alan ABC

Lloyd's Register Quality Assurance Limited. Referred 22.3.2011. <http://lrqa.fi>

Ministry of Agriculture and Forestry. Elintarviketurvallisuus Suomessa. Referred 21.3.2011. <http://www.mmm.fi> > Julkaisut > Esitteet > Elintarviketurvallisuus Suomessa (päivitetty versio)

Pouttu Oy. Referred 22.3.2011. <http://www.pouttu.fi>

Ruokatieto. 12.4.2010. Lihayitykset ottavat käyttöön sikojen hyvinvoinnin hälytysrajat. Referred 22.3.2011. <http://ruokatieto.fi> > Uutiset > 2010

Saarioinen Oy. Referred 22.3.2011. <http://www.saarioinen.fi>

Safe Quality Food Institute. Referred 22.3.2011. <http://sqfi.com>

SGS in Finland. Referred 22.3.2011. <http://www.fi.sgs.com>

Sikava. Terveysluokitus. Referred 22.3.2011. <http://www.sikava.fi> > Terveysluokitus

Oy Snellman Ab. Referred 22.3.2011. <http://www.snellman.fi>

Sorsa, K. 2010. Itsesääntely ja yhteiskuntavastuu. Työ- ja elinkeinoministeriön julkaisuja.

Sorsa, K. 2009. Itsesääntely ja yhteissääntely arvoketjussa – Toimialakohtaista tarkastelua. Oikeuspoliittinen tutkimuslaitos

## PICTURES

Picture 1: Pork supply chain. The typical value chain in Finnish pork industry.

Picture 2: The Finnish Food Safety Authorities. Source: Ministry of Agriculture and Forestry.

## TABLES

Table 1: Company shares in pork sourcing, 2006. Source: Finnish Competition Authority.

Table 2: Company shares in sales of refined meat products and ready made meals, 2006.  
Source: Finnish Competition Authority

Table 3: Certification bodies in Finland offering food safety standards. Sources: Certification bodies' websites.

Table 4: The quality standards held by Finnish meat companies. Sources: Websites of meat companies and the customer listings of certification bodies.