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## Market Innovations and Knowledge Transfer in the Agricultural Food Market

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# MARKET INNOVATIONS AND KNOWLEDGE TRANSFER IN THE AGRICULTURAL FOOD MARKET

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**Abstract:** Food markets change with increasing wealth and the globalization of the economy. WTO and EU are challenging countries to enhance lower level of national protection and regulation of markets, including the markets for agricultural foods. Thus, the producers of food are continuously exposed for competition. As an answer to this food producers in Norway have looked for different possibilities to keep up the level of production and profitability. To some degree producers have adapted to new markets by either introducing new products for a new set of customers, or by making changes in existing products to satisfy the customer preferences. Export of high quality sheep meat from Norway to Japan can be mentioned as an example of market innovations, one of the five types of innovations described by Schumpeter (1934).

In later years we have seen a tendency for groups of customers paying more for food products of certain origin, taste, design or other qualities. Although the cooperatives still are dominant in food processing and marketing in Norway, there are now an increasing number of farmers working with market innovations outside the traditional channels. Possibilities for success might depend on factors as culture, price, design and more. Specialised knowledge in different professions seems to be relevant when handling production, processing and marketing.

Questions raised in this paper are:

Is there a connection between market innovation success and the farmer's ability to develop and transfer knowledge?

How can we measure, understand and describe such processes?

**Key words:** market innovations, competitiveness, knowledge transfer, fine foods, lamb meat, added value

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## 1. Introduction: knowledge, competitiveness and innovation. Concepts as background for the study

The fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers, goods, the new methods of production or transportation, the new markets or the new forms of industrial organization that capitalist enterprises create (Schumpeter, 1943). The process of creative destruction is one essential fact about capitalism. Schumpeter says that knowledge often is important, but not always necessary for all innovations. Innovations take on different forms: incremental, radical and revolutionary, whereas the latter is the one that has most newness in it. In this paper focus is mainly on market innovations and in what way knowledge plays a role. Market innovations are processes within a firm or a chain that leads to the creation of new markets. Market innovations might be results of a reorganization of existing knowledge and production.

Dramatic reductions in the cost of obtaining, processing and transmitting information are changing the way we do business (Porter, 1998). Information technology is affecting the way by which companies create their products. An important concept that highlights the role of information technology on competition is the value chain. According to Porter the value activities falls into nine categories, where five of these are primary activities: Inbound logistics, flexible manufacturing, outbound logistics, marketing and sales and at last service. The other four are supporting activities like firm infrastructure, human resource management, technology development and finally procurement.

The value chain of a company is a system of interdependent activities where a change in one activity will give changes in at least one of the others. The linkage between activities requires coordination. Value creation in a company also includes the chains of suppliers. Every value activity creates and uses information of some kind. According to Porter (1998) handling huge amounts of information within short time will be a competitive advantage for the firm.

The information revolution is affecting competition in different ways. The rules of competition are changed due to changed industry structure, in addition some firms will create competitive advantage by giving companies new ways to outperform their rivals, and finally new businesses are developed, where many of these are developed from already existing productions.

Lorentzen (2005) argues for a change in perspective in the study of innovation from a technological focus towards a focal centre on the actors of these processes. Accessibility to knowledge is one aspect of innovation, the abilities of the actors to apply the knowledge is another.

All human economic activity depends upon knowledge so, in a trivial sense, all economics are knowledge economics (Cooke, 2002). Uncertainty often leads companies seek knowledge from outside their own firm. Therefore, turning to the firms suppliers, customers, distributors, government agencies and even competitors for searching new insight might be a way of accumulation knowledge from the outside. Nonaka and Takeuchi (1995) points that the linkage between outside and inside the firm is what explains the continuous innovation. Continuous innovation in turn gives a competitive advantage as shown:

Knowledge creation => Continuous innovation => Competitive advantage

Nonaka and Takeuchi (1995) primarily denote two distinct types of knowledge: one tacit form and the other type exist as explicit. The interaction of these two forms of knowledge is the key to the dynamics of knowledge creation in the business organization. Knowledge creation takes place at an individual level, group level and the organizational level. From the categorization under, different types of knowledge are not equally easily understood and communicated (Brown, J. S and P. Duguid, 2001):

	Easy to understand	Hard to understand
Easy to communicate	<i>Explicit</i>	<i>Systemic</i>
Hard to communicate	<i>Relational</i>	<i>Tacit</i>

Absorption and use of knowledge within a firm is an obvious advantage for the company. More important is however the knowledge that is shared by a number of the leaders and employees, since this is fundamental for building competitive assets (Nonaka and Takeuchi, 1995).

Absorptive capacity of knowledge is fundamental for innovations. For a firm absorptive capacity is defined to consist of four different but complementary parts: acquisition,

assimilation, transformation and exploitation of knowledge (Zahra and George, 2002). The variation between these components is depending on certain conditions, e.g. this variation is actually a possibility to achieve certain competitive advantages. Cohen and Levinthal (1994) suggest that firms with higher levels of absorptive capacity will tend to be more proactive.

One way of constructing a knowledge network is creating a hypertext organization, where information is being exchanged multi dimensionally between different persons within and outside the firm, is a way of constructing a knowledge network. Such a network of competence will be difficult for others to copy, and will therefore be an invisible asset for the firm. Nonaka and Takeuchi (1995) point that certain types of management is preferred for optimum knowledge creation. Mid-level managers in the firm form a bridge between the top management and the frontline. In the value chain wholesalers can have the same crucial role in information and knowledge transfer. After all, they are in the middle of the flow of information about products and feedbacks. This information might be important for innovations. Van Oort (2004) lists 8 indicators to characterize a knowledge economy:

1. Educational level
2. Share of the working force employed in “creative sectors”
3. Information and communication technology (ICT)
4. Communicative skills
5. Research and development
6. High tech and medium tech production sectors
7. Technical innovations
8. Creative non-tech sectors

These indicators can all be described statistically. A region has a knowledge driven economy if it shows high values for the indicators mentioned above. A further categorizing of these indicators leads to the three main groups: Knowledge workers, innovation ability and research and development.

Marketing is the answer to how to compete on bases other than price (Kotler, 2003). Within the markets of today, the situation is that the production capability for most products or services is larger than the corresponding demand among the consumers, expressed by the potential customers willing to pay. Kotler says that companies actually can outsource their

production while the marketing has to be handled by the company as a part of the main management.

Selling starts when a firm has a product, but marketing starts before a product exists.

Marketing is the technique finding what people need and what the company should offer.

Marketing is a long-term investment effort. Marketing management is the business function that identifies unfulfilled needs and wants, defines and measures their magnitude and potential profitability, determines which target markets the organization can best serve, decides on appropriate products, services and programs to serve these chosen markets, and calls upon everyone in the organization to think and serve the customer. In short, marketing is, according to Kotler to convert peoples changing needs into profitable opportunities. Communication is therefore central in marketing.

In a modern company the accounts shows only a part of the total values. The rest of the firm value exists as intangible assets. Brand is one of these invisible assets. The value of the existing number of customers is not a part of the balance, neither is knowledge. The gap between the physical values, which are listed in the account and the firm's real values are noted as invisible assets. Kotler (2003) says that companies would be wise if they start identifying and assessing all their marketing assets such as their brands, customer relationships, employee relationships, channel relationships, supplier relationships and intellectual capital. The company should choose marketing activities that build the value of their market-based assets. It is therefore a pre for the company to know its total resources and how to manage these optimally.

It is increasingly the case that the rising costs and risks of innovation make it difficult for any firm to undertake the knowledge-intensive development on its own (Lei, 2003). As firms move towards establishing, closer relationships with their suppliers, partners and even their competitors form a new paradigm of strategy, value creation and organisational design. Within an innovation net, firms are becoming increasingly specialized in their value-creation activities, and yet simultaneously interdependent on other economic entities to shape the underlying value proposition offered to customers. Competitive advantage in the innovation net is based on learning and absorbing new sources of knowledge, no matter where they may emanate.

## 2. Knowledge exchange and competitive situation in food and agribusiness

Cooke (2002) points out food production as an activity that has become more knowledge embedded. Agricultural research continues to have an important impact on the development of agribusiness, for example in biotechnology.

This is also the situation for the food industry in Norway that is now knowledge-intensive and relies on this characteristic to be competitive. Smith (2000) says that the modern food industry is knowledge using but not to the same extent knowledge creating. Smith talks about different stages in the Norwegian food industry value-chain, where different levels are related to their knowledge content and knowledge suppliers.

Food plays different roles for different persons, where taste and nutrition are just two of many factors. Consumer preferences are widely investigated. Cook et al (1996) did a study on efficient consumer response in 16 commodities in North London. Here, category management was a key part, involving the social and economic geographies of food provision. Cooke stressed the information from consumers back to retailers and producers of food to be more important for the producers. Cooke points that it is the retailer that understands his or her customers best.

What criteria customers watch for when choosing products varies. Some weigh price as most important, others prefer foods made with special attention to the environment. A number of customers look for nutritionally healthy food with low fat and high protein content, and others even take this preference longer and asks for so-called functional food (Mark-Herbert, 2005). To most people, there is a demand that food is safe to eat, meaning that one is not exposed to for example infections or radiation if eating the products. Some customers also put ethics as a selection criterion for the food they buy, and as a result of this, gene modified products are not accepted by everyone. Religious norms also sets demands for how the food is prepared, mentioning the halal slaughter procedure as one of these. When the household economy increases, people let food play a rather more sophisticated role. This is also expressed by a willingness to pay relatively more for the actual type of food. The market for deli food seems to be increasing in Norway. The segment of fine food seems to be investigated to just a small extent so far. Target group analysis for Norwegian fine food shows

that three of five respondents say that they are willing to pay a bit more for Norwegian food labelled with some kind of extraordinary, with a range of 15-25 % over prices of similar products without this extra qualities. It is also interesting to watch the trends in comparable countries, and Norwegian farmers should have interest in learning from how their colleagues handle the fine food market.

Murphy et al (2002) has made an analysis of the market potential for Irish delicatessen. Also here the niche market for speciality food is growing, and this gives small agribusinesses an opportunity to operate to satisfy the customers demand for high quality artisan foods. The expert panel claimed that the market for these products would increase with 65% over the next ten years. Cured meat, yoghurt and cheese were predicted to have the highest raise in demand. Sales through delicatessen are indicated to have a value of Euro 47 million by 2010. The largest growth was expected to come during the first five years.

When food is getting other values than the nutritional role, this will also challenge the type of information that follows the food from farmer to consumer. Labelling has become very common. According to the Bord Bia, an Irish national government promoter for food, food consumers rely heavily on labels for transfer of knowledge. Also Internet is used as an essential channel for producer consumer communication. Foods, and drinks as well, of special geographical origin might be qualified for exclusive labels like the French AOC (Appellation d'Origine Contrôlée).

In the delicatessen, the labelling might play another role than in the groceries. In the delis the consumer likely asks and the wholesaler answers on questions on the different food products. The customers might also taste the products before choosing which one to buy. This direct product response from the customer is information of high value for the food producer, since this might be essential for the firms competitiveness and for new market innovations.

Still labelling is important for the wholesalers so they know what they actually sell and what information that is connected to the individual products. An example is the Pata Negra Bellota, an exclusive production where Iberian pigs are fed with natural acorns and grass. The production of the pigs and following processing of the meat is done according to strict quality standards. One thing is the taste of the meat, which might explain some of the high prices that are charged for this quality, another explaining moment is the storytelling about the



production to the customer, which in itself adds a value to the meat. Prices of Euro 125 were recently noted per kilo for this quality, and this is many times higher than the prices obtained in the conventional market. The Pata Negra Bellota is an example on how farmers use knowledge transfer as a competitive asset resulting in higher prices for the products to be sold.

The capitalistic and material resources of a farm might be to the first sight rather identical. Taking the immaterial resources in account, the picture can change radically. Immaterial resources, where knowledge is one of these, are not always easily to measure or describe. Knowledge is not among the resources given a certain economic value, although still it obviously has large influence on the economical results of the company. Having invisible assets is a possible competitive asset for the firm, and it is interesting to study the role of knowledge transfer in the market of fine food.

Sporleder and Moss (2002) have identified some characteristics unique to the environment where agro-food supply chains operate. Relatively low embeddedness, low social capital and fairly low levels of trust are their descriptions of the agro-food firms in supply chains. Implementation of knowledge management in these firms would possibly change their strategic positions. Intangibles may change the fundamental characteristics of the supply chain to strong ties and close network. These supply chains are characterized by high embeddedness, high social capital and more easily exchange of tacit knowledge. Also higher levels of trust are characteristic of such groups of firms, and these abilities are consistent with learning firms where knowledge management is integrated as a central part of the management.

Sporleder and Peterson (2003) talks of learning supply chains. Learning supply chains are integrated supply chains that have an ability to learn from and respond to changing market environments because knowledge and intellectual capital are held and applied collectively by the actors of the supply chain. The benefits for these kinds of firms compared to those more basic ones are the tighter coordination among participating companies based on shared knowledge management. This management focuses on the response from the market and not only efficiency in transactions between firms.

According to this, chain models can be classified by their learning potential: the chain master, characterized by one dominant firm interacting with other in the environment of low trust and sparsely sharing of knowledge, and finally the so-called chain web. These consist of firms where the relationships between firms are continuously changing and competition takes place within as well as outside the member group. Smaller food firms and the computer industry fit this supply chain model. The chain organism model is named for groups of companies acting as one common unit. Here we see a collective way of making decisions and knowledge is shared open between the actors.

The cooperatives have had, and still have, a strong position in the Norwegian production, processing, marketing and distribution of foods. For years the cooperatives has more or less operated as a buffer between the market and the farmers. As a result of this, Norwegian farmers have not been forced to think of their markets and market adjustment, and the farmers in general therefore still have a potential when it comes to competence on markets. Quantity has dominated over diversity in Norwegian food production. The farmers have lot of know-how on production, while they have let the cooperatives concern about processing and marketing. The national politics of agriculture in Norway is dominated by a rather high rate of subsidisation of food production. With WTO and EU, the protection has decreased the last years, and the producers of food are now almost continuously exposed for competition. To build possible competitive assets, some of the farmers and other actors in the agro food chains made new constellations of cooperation. This was also the situation in the case of Henriettes, where sheep farmers from Mid-Norway responded to an initiative from one of the local private butcheries. After a set of reorganizations, they started exporting their lamb meat to Japan in addition to delis in Norway. I will give a further description of the project Henriettes in part 4 of this paper.

### 3. Casestudies

Three case studies are picked to shed light on the theoretical considerations. The case studies focus on knowledge and innovation in food markets conducted by Norwegian agribusinesses. It is interesting to see if there is a potential connection between knowledge development and transfer and the innovative capacity of the firms.

#### *Casestudy 1: Innovation systems of food industry in Mid-Norway*

Food industry is the dominant industry in Mid-Norway employing 6000 people, when both agribusiness and fisheries are included. The aim of the study was to analyse how clusters of food industry in the region can develop into successful innovation systems. To give an answer to this, Fraas and Pedersen (2005) made interviews with 16 companies in the sector. In addition 222 companies took part in a survey where knowledge, innovation and development were the most important parts of the research.

Many of these firms say that the power of the market is located to the consumers and that this leads to lower prices. 19 of the companies say that the strong power of the customers is positively correlated to the spectre of products. Many respondents also look upon the power of customers as positive for the development of the company.

The research results indicated that the companies have very high standards for product quality and processing, while the ability to find and operate in new markets still have a potential. The majority of the firms actually say they know their market well. One of the firms misses information from the consumers, which is one further step in the chain from the level that buys their products.

The Mid-Norwegian niche food producers must make radical changes if they shall become more industrial organized. A few food producers point their ability to change as an important strategic pre. Also the ones that have great focus on their markets and market relations are the same as those looking upon social and network competence as strength for the company. When choosing sources for information related to innovation and development, the food

businesses rank is as follow: information from customers is the most important, then internal information, concurrent and finally suppliers. Customers and suppliers are said to be the actors of highest priority for the company when cooperating for innovation.

The variations between food industry companies in Mid-Norway are reflected through their need for and use of knowledge, competence and skills. Only one of the 16 firms says that they might ask for research-based knowledge at regional, national or international level.

On the question of barriers for innovation, the food industry ranks organizational relationships as the most important, with lack of market information and knowledge as the following moments. Also quality development and market knowledge are mentioned as challenges for innovation. Only two of the sixteen firms say that hiring external competence services can be done in the future.

Some of the agro-food companies says that being dependent on the suppliers knowledge is a weakness when they want to understand the processes in the value-chain and also when trying to maintain knowledge control in the chain.

The most surprising result of this study is that the companies seem to have a high consciousness of their challenges on innovation, but at the same time show a low disposition for obtaining supplemental knowledge to become more innovative. According to this, there is still a potential for improved knowledge and innovation management in some of the Mid Norwegian food industry.

## *Case study 2: Managing in the marketing department of a Norwegian food industry company*

Lien (1997) has done a number of case studies in the Norwegian food industry. From an anthropological point of view, she has made interviews with the marketing department of the firm of investigation over a longer period of time. One of her conclusions is that there is a close relationship between the production of food for sale and the production of knowledge.

This is particularly apparent during stages of controversy, when considerations retrieved from a repertoire of knowledge of both material and social conditions become relevant to particular decisions.

”Tell me what you eat and I will tell you whom you are.” A challenge for the food producers is to have channels for information that emphasise and intermediate the products so-called added value that makes the consumers willing to pay more for the goods. Understanding the social values of the target group for a food product is essential in marketing, because information about the diverse products must be communicated through marketing and advertising to the presumed corresponding consumers.

Lien (1997) followed a certain foods marketing department when introducing convenience foods as frozen, readymade dinners to be heated in microwave ovens. The promotion was named The Bon Apétit Project. The additional value of the food was actually more spare time for the consumer. The image of a consumer target group is applied to the final product image.

In one of Liens other cases pizza was the product to be advertised. Connecting the product and the consumer in marketing is here interesting on a general base. In the market segment for pizza the attention is put onto the feeling of community by eating a product that has its greatest extension in the population situated in the origin of the so-called monitor socio graph. The socio graph classifies the target group according to their characteristics as either “material or ideal” or “traditional or modern” and this information is useful in marketing.

Also in these cases it is vital to be open for response from the consumers since this information can be used when the company is promoting new products or acts in to them new markets. This exchange of information does not require direct communication between

farmers and consumers. The wholesalers seem to play a central role in this, while these have direct contact with both the consumers and the farmers or processing firms, like butcheries or dairies.

It might be relevant to transform this way of seeing the actors in the food trade to the management of a company. Farmers then correspond to the employees, the wholesalers correspond to the mid-level manager and the consumers might be equal to the managers, because they make the final decision about what to buy or not. Information and knowledge passes between the different actors, and new knowledge is developed as a result of this information. Within a food chain, the different actors' abilities to absorb, transform, use and develop knowledge can therefore be a turnkey to guaranty competitive assets. This hypothesis can be seen in the light of Nonaka and Takeuchi (1995), which says that middle leaders are the most critical when knowledge should be developed and transformed.

As a summary, the most interesting part of Liens work is the documentation of the complex set of interrelation between the material and the symbolic properties of the food product. The market department or other actors in-the-middle of the value chain have central positions while getting information from both consumers and producers and the challenge is then to turn this into the market innovation work.

### *Case study 3: Innovation and changing 'worlds of production – Case studies of Norwegian dairies*

This case, identify and discuss problems and important factors in the processes of product development. Stræte (2004) made interviews and observations of product and market innovation processes in three distinct Norwegian dairies over a total period of six years. The background for the case studies was among other things that restructuring within the agro-food supply chain had given rise to a debate about how to maintain the creation of *local* added value. The dairies, which had tried to develop new products, constituted the empirical basis. They were all local firms within a larger cooperative company.

The study supports that entrepreneurial capabilities are important for innovations, since knowledge in entrepreneurship is necessary if established conventions shall be challenged. Lack of innovation success for two of the dairies was explained by the fact that mass production was deeply rooted in the traditional convention, and the needed entrepreneurial capabilities to get out of the routines did not exist. The local cooperative did not manage to handle this new need for competence in product development and marketing. The knowledge about marketing was not a part of the local dairy base resources through the national dairy cooperation. The tight connection to the national dairy cooperative did not give a supporting influence when the local dairy should develop the necessary competence and the new products on its own. Taking the new products to the market failed.

In this case the farmers' entrepreneurial knowledge was not enough to realize a market innovation success. Also intensity of integration between firm and parent company and strength of the firm's embeddedness to the local community explained variations in innovation success.

#### 4. Market innovation and knowledge transfer – a Norwegian case: Export of lamb meat to Japan

Export of fresh lamb meat from Mid-Norway to Tokyo is an example of a market innovation. The first delivery of meat from Mid-Norway to Japan took place in February 2004, as a project named Henriettes outsourced by the private butchery Midt-Norge Slakterier.

To satisfy the Japanese discriminating palates, high standards of product quality is naturally a premise to operate in this market. Norwegian lambs meat cannot be sold at low price, due to high costs in production, therefore other competitive advantages rather than price must be dominant. The manager was aware of this, and started nesting what should become a market innovation in the latter part of the chain of production and distribution. By starting the marketing work by asking the potential consumers in the end of the value chain, the standards of quality was defined and the correlated production and logistics was organized to match these specific demands. Transport of the meat had to be effective in time to avoid the meat losing its high quality both in taste and hygiene. Finding optimal flight routes to make delivery time as short in time as possible was pointed. At the slaughters house, the meat for export had to fill certain standards of quality. These varied a bit from the standard EUROP system for price and classification of meat since the amount of fat on the carcass was relatively higher without prices to the farmers decreasing. Amounts and qualities of fats are crucial factors affecting taste of the meat. Allowing higher percentage of fat content is therefore an answer to the market request for high scores on taste.

Both production and product quality is stressed in the project Henriettes. Not all farmers match these demands for production quality. The butchery chose to set standards for how the production at each farm should be executed and signed contracts with those farmers in Mid-Norway who wanted to take part in this project and also passed the level of production standard that was expressed. Production quality affects many conditions and among these are breed, feeding regime, animal welfare and more. For example, only meat from one breed, the Norwegian Dala Sheep was accepted. Further, according to the feeding regimes, two groups of qualities were defined: the “beyond organic” and the “grass-fed”:

Henriettes high-mountain lambs of Norway, are born on mountain farms in Mid-Norway in April. They roam with their mothers in the high mountains feeding on milk, unfertilized



mountain grass, herbs and flowers. This is said to give a quality "beyond organic". In the wintertime the lambs are taken into wooden barns, individually handled and fed mountain grass and silage harvested locally on each mountain farm. Lambs slaughtered from January through March are denoted "Grass fed". The sheep are grazing in the mountain area for several months. This gives a high content of protein in the feed and the herbs give a characteristic taste to the meat. It is also to be mentioned that the production of sheep in Norway keeps a high standard for health and animal welfare.

A change in the way sheep production is practised at the particular farms was necessary for being able to deliver fresh meat throughout almost the whole year. In Norway the most common way of sheep production is to send almost all the animals except from breeders for slaughtering in the autumn. This means that huge amounts of sheep meat are then frozen and sold through the next season. Fresh lamb meat is therefore not that common for consumers in Norway either, as we might expect. With the Henriettes-project, the farmers keep a number of their lambs also for the winter months, getting better paid per kilo meat than if they send all animals simultaneously to the butchery when the prizes are low.

When it comes to product quality, all efforts were made to ensure the optimum results. The farmers themselves take their lambs to the local slaughters house ensuring minimum stress factors and transport time. Careful transportation and animal care is also positive for the quality of the meat. At the slaughters house each lamb carcass is naturally tenderized and the stress level is monitored. Each lamb cut is vacuum packed and marked with the farm's name, lamb species and lamb number. Via the Internet one can view the mountain farms the lamb meat are coming from ([www.henriettes.com](http://www.henriettes.com)).

Knowledge and transfer of knowledge is essential for an effort like this to become a success. The total production chain in Henriettes is complex and involves many different types of knowledge to make sure that the total quality standard is filled. Previous for the export, much effort has been put on testing products and response from the target group. Details are essential for the quality to be optimal. The Japanese had given descriptions in details for how they want the specific products, and information about this has been carried back to the producers and the butchery. One of the central managers in the Henriette-project had a long time experience from the successful companies Ekornes and Jøtul, both of them exporting their products of furniture and ovens. Now this accumulated knowledge was highly useful in

the export of meat. Further, an important criterion for success of the export was that the managers knew the limits of the knowledge within the chain, and then looked for the very best supplemental worldwide competence to complete the knowledge map in the whole production and distribution chain.

Before the export of the lamb meat started, the innovators went abroad to import supplemental knowledge about meat technology and also to get inspiration from how traditional recipes could be adjusted to the market of today. The supplemental competence was mostly transferred from New Zealand and from France. Not only new methods of tenderizing were investigated. They also studied the traditional pre-industrial ways of ensuring high quality of meat through long time and low temperature heating. With the meat to be sold there also follows recipes with ideas and inspiration for how the meat can be successfully prepared. These recipes are developed in cooperation with master chefs.

Among the challenges for the Henriettes-project is the tax system for this specialized production that is the same taxes as in the bulk production. A certain fee is paid by every farmer to finance national market regulation. In general this tax might be the price the innovating companies pay due to them being among the first companies to do their business differently from the production the rules and regulations are built to cope with.

One of many motivations for the Mid-Norwegian farmers to take part in this high quality production is probably the possibility to get better prices for their products. The willingness to pay more for certain products exists in the high cost and high quality demand country of Japan. Continuously handling this challenging Japanese market means for the butchery that they at any time must give attention to the quality of the whole chain. This has given positive effects for other divisions of the butchery in terms of team spirit and pride and is also an extra inspiration in further efforts.

In summary, the project Henriettes with export of lamb meat from Mid-Norwegian farms to Tokyo is to be considered a market innovation. The driving force in the lamb export project of Henriettes, is the supply chain's ability to see consumer demands and respond. An essential success criterion is the capability to organize existing material and immaterial sources in the whole chain of farmers, butchery and wholesalers. But this is not enough. To be able to operate in this exclusive market, the capacity to see when and what types of supporting knowledge is necessary is also needed. This knowledge absorption and following

reorganization of production and services is what makes the Henriettes-farmers and butchery capable of delivering lamb meat having the quality that passes. It is more likely for the farmers to realize a market innovation if they are organized as an innovation net in where flow of products and information are shared. The network is managed as a whole, and over time this network organization is also useful when keeping up competitiveness. Still there are some challenges for this way of selling agro-food, and especially government market regulation fees are pointed here.

## 5. Conclusions

The ability of the farmers to develop and transfer knowledge related to their business is only one of many factors that influence on agribusiness market innovation success. Studies indicate increased options for success if the innovator starts the marketing process backward: Here, the producers ask their customers about their preferences and then after build production and processing in a way that satisfies the demands of the market of request. This perspective was also the case in the project Henriettes where a local butchery and a group of sheep farmers in Mid-Norway reorganized to match preferences defines by Japanese gourmets. Knowledge management is essential in marketing processes like in this case, and the managers should pay attention to both explicit and tacit knowledge. In addition, the need for supplemental knowledge must be described and obtained in the innovation process.

Defining added values of foods and putting a price on these values is a possibility for farmers to increase their product prices. These added values must be communicated through the whole value chain so that the consumers get hold of this extra information when buying the agro-food product. It is to be mentioned that consumer response is one of many factors affecting market innovations. Some radical innovations come when business actors are in front of peoples own consciousness of needs they not yet know they might have.

The results that are seen in the project of Henriettes are in line with Nonaka and Takeuchis theories of the knowledge creating company (1995) and also Sporleder and Petersons theories of learning supply chains in agribusiness (2003).

The growing market for fine food in Norway gives the farmers both opportunities and challenges when handling market innovations. Probably the Norwegian farmers have quite a few things to learn from their colleagues in comparable countries, who have longer traditions for matching this particular segment of the market. Further studies will give more facts about knowledge transfer in agribusiness market innovations.

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