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*Vägen till ökad  
uthållighet i  
livsmedelskedjan*

*Towards increased  
sustainability in the  
food supply chain*

*Vejen til en øget  
bæredygtighed i  
fødevarekeden*

*Veien til økt  
bæredyktighet i  
matvarekjeden*

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## Knowledge sharing in organic food supply chains

Although local, short supply chains are regarded as most suitable for organic products, most organic food is sold through general retailers. The extended supply chains create challenges: (1) how to sustain the connection between farmers and consumers and deliver the multifaceted value of organic food and (2) how to cooperate to meet both the needs of consumers and of each independent company involved in the supply chain. Previous studies of supply chains have suggested that information or knowledge sharing is the key to meet these challenges. A case study examined the current level of knowledge sharing along two organic food chains from farmers to consumers. The findings suggest that communication, which is more open and covers a wider scope, would be advantageous. Furthermore, the horizontal collaboration between actors specialised in organic food is emphasised. Further research is needed to develop innovative ways to share knowledge and collaborate among the actors.

### Problems in the organic market

Organic food accounts for only a small share (0–5 %) of the total food market in many European countries (Hamm and Gronefeld, 2004; European Commission, 2005). The problems identified as the main hindrances to growth are poor availability and the high prices of the products, the imbalance between supply and demand, high operating costs, lack of information flow, ineffective promotion, and poor reliability of supplies (Bähr et al., 2004; Baecke *et al.*, 2002; Franks, 2003; Hamm and Gronefeld, 2004, Finfood, 2004 a, b). All these issues shift the focus to the organic supply chains and call for

solutions that involve knowledge sharing between the chain actors.

### The organic market in Finland

The retail sale of organic products in Finland is estimated to account for a total market of 0.8 per cent (Heinonen, 2007). Although sales have recently increased in many western countries, in Finland they have developed very slowly. In some countries, one actor, such as a supermarket chain, has taken an active role in developing the organic market. This has not happened in Finland where the retail sector is highly concentrated; two leading retail groups manage about 70 % of the market. This is seen, for example, in the absence of organic private labels that are common in many countries. The national, state-owned organic label, Sun-label, prevails in Finland and is well-known among consumers.

### The case study

To understand better knowledge sharing in a real-life context, researchers conducted a qualitative case study with two cases (Yin, 2003). The cases, two organic chains, were depicted from the organic manufacturers' point of view, following their main products upstream to a couple of farms and downstream to consumers via retailers. In both chains, the manufacturers were small companies, specialised in organic production and owned by organic farmers. With the exception of the manufacturer and its suppliers, the proportion of organic food was small, as it is in Finnish food chains in general. The cases differed from each other in two respects: product characteristics (yoghurt as a fresh product vs. muesli with a long shelf

life) and marketing concept (a manufacturer marketing its own product vs. a manufacturer marketing via a big company).

The study examined knowledge sharing in the processes of replenishment, assortment, promotion, and product introduction. The data were gathered by interviewing the actors along the chain (from farmers to retailers, altogether 36 persons) and by focus group discussions (five discussions, with a total of 17 consumers, users of organic products). The researchers identified what knowledge the actors needed in each of the various processes, the possible lack and/or source of the knowledge as well as the actors' satisfaction in sharing that knowledge. Critical knowledge was determined by identifying knowledge that most of the actors perceived as being relevant for conducting their own part of the process or for improving their performance (actors from farmers to retailers), or helpful in making buying decisions (consumers). The concept of knowledge was used in a broad sense to include information as fragment of knowledge (mainly, explicit knowledge) as well as know-how and understanding (embedded knowledge).

### Findings and discussion

Five categories of critical knowledge emerged from 19 different kinds of knowledge the actors needed for the various processes. Although most of the actors were quite satisfied with the knowledge sharing, only a narrow portion of the knowledge that was needed was shared. Poor knowledge sharing is not unique to organic supply chains, but is found in other food chains as well (Alvarado and Kotzab, 2001; Fearné *et al.*, 2001; Sporleder and Peterson, 2003).

The focus of knowledge sharing was almost exclusively on efficient product flow. However, information about the products available did not reach consumers. Most of the actors recognised the poor quality of knowledge flow to consumers, but could not solve the problem alone. Consumers' poor knowledge about the organic products within the assortment of the stores, may further undermine their perceptions of the range of available organic products, and yet be partially responsible for the gap between sales figures and potential demand.

The details of the sales served as the main transmitter of the consumers' voice. Despite the opportunities provided by ICT, the sales data were utilised poorly in

terms of being shared among the supply chain actors and analysing the demand for organic products. The consumers were quite sceptical of the system of registering purchase details for the purpose of customising communication according to their buying habits. Nevertheless, consumers were willing to sign up for special mailing lists to receive additional information about organic products (Kottila, Rönni, in press).

Knowledge both of the target group and of the potential added value was fragmented, to a large extent embedded, and the latter was also controversial and therefore difficult to share (Small and Sage, 2005/2006). The embedded nature supports close interaction between the organic producer and the consumers to deliver that knowledge (Schmid *et al.*, 2004). However, the consumers had knowledge of the potential added value and recognised the organic products with the help of the Sun-label. This indicates the important role of actors beyond the primary members of the supply chain in delivering knowledge to consumers.

Despite the challenging conditions given the great variation in the significance of organic products and the power of different actors, the actors were able to identify shortcomings and potential improvements and even find mutual solutions, when given a special forum. The findings also demonstrated that a trustworthy relationship can evolve between actors with power imbalances and when realised, underpins knowledge sharing (Morgan and Hunt, 1984; Kottila and Rönni, 2008; Hingley, 2001).

### Practical implications

The findings suggest:

- 1) communicating more openly in order to overcome the current practice and culture of the supply chain.
- 2) more horizontal collaboration between the actors specialised in organic production to strengthen the bidirectional knowledge flow directly and/or via retailers to consumers and develop the scattered knowledge base of the added value of organic products.
- 3) better placement, assortment information available in print or electronically in stores, in-shop product demonstrations as well as proper education of the staff to improve consumers' knowledge about the assortment of organic products.

- 4) in the event organic perishables are not delivered every day, information on the days of delivery, as well as the chance to place orders in advance might be worth considering.

### Suggestions for further research

The findings suggest there is a genuine need to develop ways to share knowledge and collaborate as well as to develop methods of studying collaboration along the whole supply chain of organic products. In order to take into account the different characteristics of organic market, studies conducted in several countries, for example the Nordic countries, are preferable.

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