

## ► Project *brief*

Thünen Institute of Market Analysis

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# Consumers' perceptions of organic food processing – first insights into milk and juice processing

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- **Occasional organic consumers have little knowledge about processing organic foods. Focus groups, using the example of milk and orange juice, show no clear preferences for specific processing technologies.**
- **Processors of organic food face the challenge to anticipate consumers' preferences and develop technologies that are in line with consumers' general expectations and the organic principles.**

### Background and aims

Global market shares of processed organic and convenience food have increased over the last years, especially in industrialized countries. At the same time, there is a lack of legal regulations for the processing of organic food based on the organic principles: gentle or careful processing, high food quality, low environmental impact and high consumer acceptance. The "ProOrg" project aims to develop such a guideline or code of practice (CoP) for organic processors, while accounting for consumers' expectations in terms of quality and transparency.

Thus, this study examines the knowledge, opinions, and expectations of consumers towards selected processing technologies for organic food. The following research questions were answered:

- What do consumers know about (organic) food processing?
- What do consumers expect from organic or careful processing technologies?
- Which of the processing technologies presented do consumers prefer for organic food?

### Methods

Since there is little research on consumers and processing technologies related to organic food, focus groups (FG) are selected as an explorative method for collecting primary data. FGs are carefully planned discussions, which are carried out based on a series of key questions with several – mostly eight to twelve – participants.

For this study, we conducted nine focus groups in Germany and Switzerland with a total of 84 participants who bought organic products at least every two weeks.

Each focus group had the following socio-economic criteria:

- 33% to 66% female,
- 50% between 18 to 45 years and 50% between 46 to 75 years,
- min. 33% and max. 66% full-time or part-time employed

Discussions started with general thoughts on processed foods and expectations of processed organic foods compared to non-organic products. Specific processing technologies were discussed for milk and orange juice.

### Results

Regardless of which technology was discussed, the participants had different and often contradicting opinions and were little aware of the processing technologies. The participants mostly associated additives, artificial flavours, preservatives, E-numbers, chemicals and plastic packaging with processed foods, mostly negatively connotated. But participants also mentioned advantages of processed foods: easy and quick preparation, simple portioning and the possibility of consuming a wide variety of non-seasonal products. According to most of the participants, the same advantages of processed food also held for processed organic food. However, some of the frequent organic buyers rejected higher degrees of processing. Furthermore, transparent and sustainable value chains were linked to organic food. For most participants, processing technologies were not part of their concept of organic and were rarely mentioned.

### Milk

The preferences for milk mainly depended on participants' lifestyle and habits. For most participants, homogenization was in line with their idea of "organic" since nothing was added and

the ingredients of the product were not changed. Pasteurized milk was also accepted and for many, microfiltrated ESL (Extended Shelf Life) milk, i.e. "fresh milk" with the claim "longer lasting", was a good alternative to pasteurized milk due to its longer shelf life. For some sceptical consumers, the degree of processing of ESL milk was too high.

UHT milk was the most debated. Some rejected UHT milk because it did not meet their idea of organic processing, naturalness and freshness, others bought it out of habit or convenience. In general, for many participants animal welfare was more important than how milk was processed.

#### *Orange juice*

In the discussion about orange juice, juice from concentrate triggered a spontaneous negative reaction in some participants, while other participants were positive towards juice from concentrate. They emphasized the equally good nutritional values and the ecological advantages of transporting just concentrates instead of juice or fruit.

The majority preferred fresh pressed organic orange juice. However, the relatively short shelf life of seven days was a challenge for some. As a result, participants were generally very positive about high pressure processed (HPP) juice, which has a longer shelf life, although there were concerns about the potential high energy consumption and the use of PET bottles. They found the necessary high pressure to be unproblematic as long as the nutrients are preserved, and shelf life increases. Some participants associated less food waste with longer shelf life.

#### *Careful processing*

Organic products such as milk or orange juice are sometimes advertised with the term "carefully processed". Despite the use of the term on food packaging, the participants did not have a common understanding of the term "careful". Rather, the discussion with the other participants resulted in a variety of associations. Processing technologies, ingredients and quality

aspects as well as environmental aspects, small-scale farming and animal welfare were associated with the term "careful".

With regard to the processing technologies discussed above, the participants unanimously classified UHT milk as not being careful. In the case of orange juice, direct juice was perceived as being more carefully processed than juice from concentrate. With HPP and pasteurization, there was no agreement as to whether high pressure or heating was more careful. Some frequent organic buyers found none of the processing methods discussed to be careful. The participants expected a clear definition of the term "careful", especially within the organic sector, where transparent communication was even more expected.

#### **Conclusion**

The overall aim of this study was to examine the knowledge, opinions, and expectations of consumers about processing technologies for organic food. The results of all focus groups indicate that consumers are more concerned with the organic production of raw materials than with processing technologies. Due to the lack of knowledge, the participants were often overwhelmed with the assessment of the processing technologies. Nevertheless, it would be rash to conclude that they have no interest in the quality of food processing.

For the processors of organic food, these results mean that they should develop and use processing technologies that are in line with the (implicit) values and expectations of organic consumers. The use of raw materials from an ethical and organic production while emphasizing a transparent communication of sustainability aspects throughout the entire production process is highly suggested.

The outcome of these focus groups gives first insights into consumers' knowledge, opinions, and expectations regarding processing technologies. Due to the qualitative and explorative character of the focus groups, the findings are not representative. A quantitative analysis by the Research Institute for Organic Agriculture (FiBL), one of our project partners, will contribute to a more representative picture.

## Further Information

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### Support

