Organic Food Processing: A Framework for Concept, Definition and Evaluation from the European Perspective


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Recently organic food quality was described by principles, aspects and criteria, when the principles from organic agriculture were verified and adapted. When this quality concept was applied on the organic food chain, it resulted into a problem, that clear principles and related criteria were missed to evaluate processing methods. Therefore it seems essential to describe and discuss the topic of organic food processing to make it operational. This is done by adapting the underlying paradigms and principles of organic agriculture and food on processing as one step in the food chain. The focus is on concept development, starting definitions and examples for verification.

Method

FQH experts and invited guests elaborated a framework for concept development, definition and evaluation of organic food processing. The work was carried out within FQH with 10-12 experts at three expert workshops. This poster summarizes the outcome of these meetings. The descriptions and discussions are based on relevant scientific literature, including primary research and reviews, reports, books, dealing with organic food quality issues, IFOAM-Principles and Standards, the EC-Regulations, as well as personal consultancy with different stakeholders in the organic sector.

Results principles:

* Natural and healthy nutrition
* Sustainable development
* Appropriate technology
* Careful and minimal
* Integrity
* Whole food chain (field-fork)

Concept

The conceptual framework is based on
1. Underlying paradigms in organic agriculture and food as extracted from literature (scientific articles).
2. Underlying principles coming from analysis of the history of organic processing from various sources (e.g. reports and books).
3. Clustering processing methods according to literature and organic standards. Identification of gaps.

Results paradigms:

* Identity (organic agriculture as example) versus Decomposition (Life Science, biotechnology as example)
* Converging technologies & decomposability versus Agro-ecology & integral product integrity

Levels for evaluation: The criteria for evaluation will be described through a multidimensional approach, which connects the principles through measurable parameters/metrics.

Further work

There is an ongoing process within FQH writing a position paper on this topic to be published in a scientific Journal. The feedback from this conference as well as from other conferences and meetings in 2013 will be implemented and the text will be circulated among stakeholders through TPOrganics, before being published.

Figure: Results from survey among 200 exhibitors on Biofach 2012:
What is related to organic, careful processing? Outcome: 1. Careful is not minimal, 2. Product related quality the top goal of production, 3. Restrictions in technologies accepted

Figure: Results from milk heat treatment study, comparing different heat technologies and their impact on milk nutritional quality parameters (Morales et al. 2006). Outcome: based on a few product related parameters, the loss in quality can be made visible related to different processing technologies.