

Quality analysis of critical control points within the whole food chain and their impact on food quality, safety and health (QACCP)



CORE organic



Quality analysis of critical control points within the whole food chain

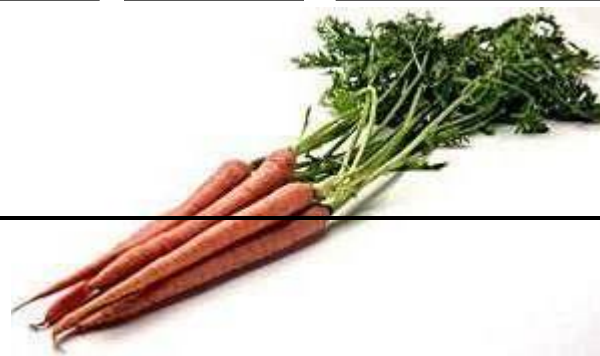
Production

Processing

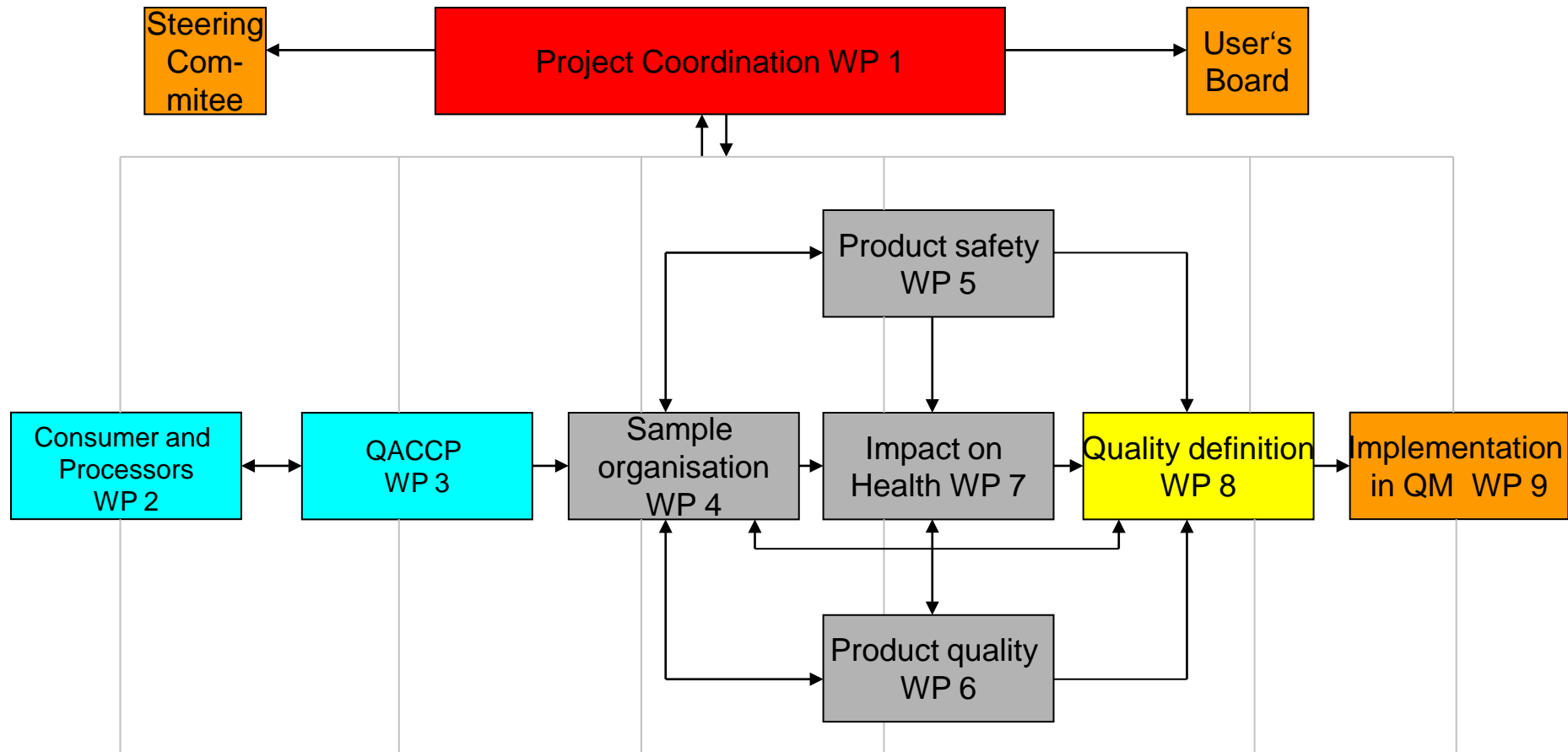
Trade

Storage, Transport

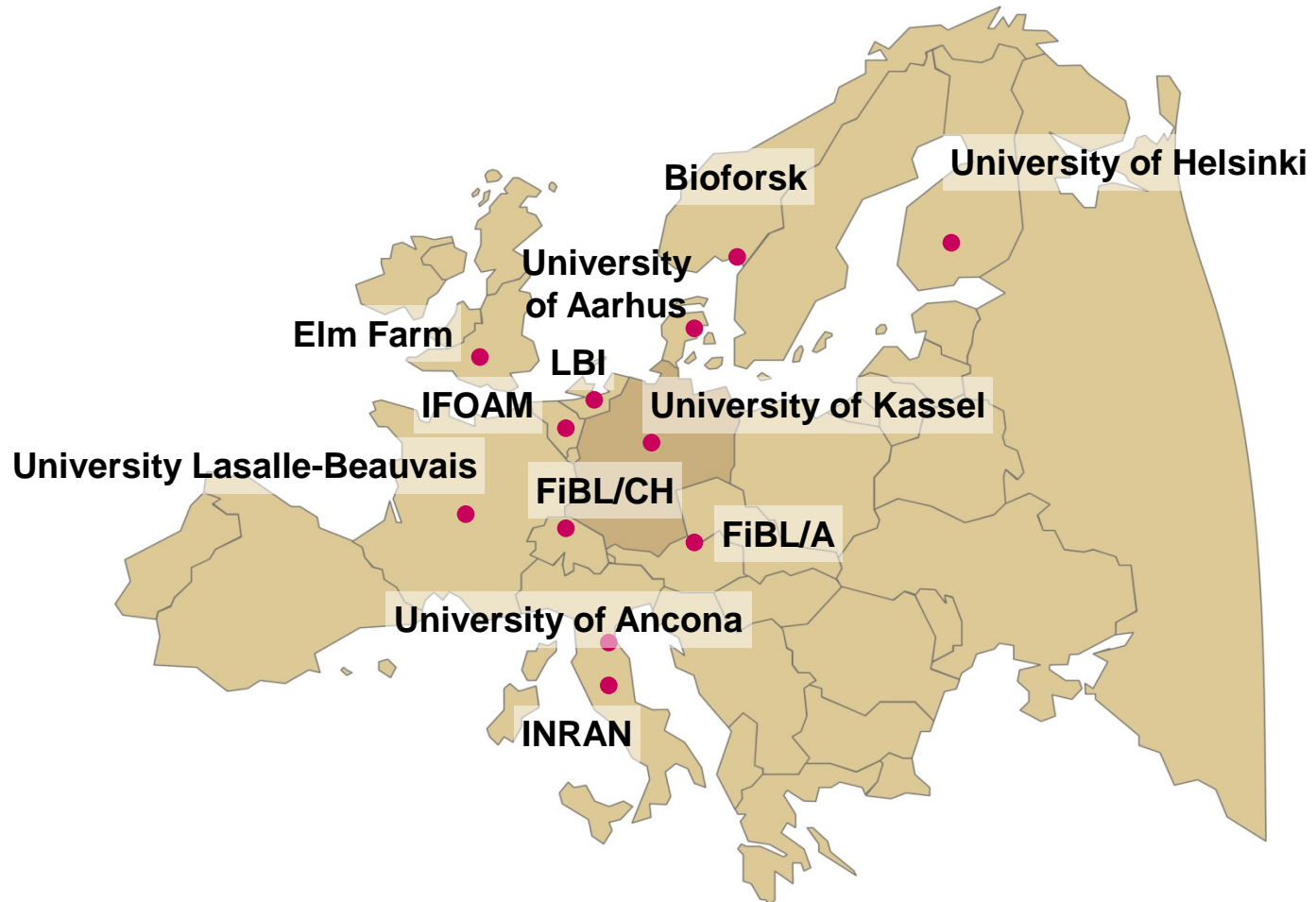
Consum



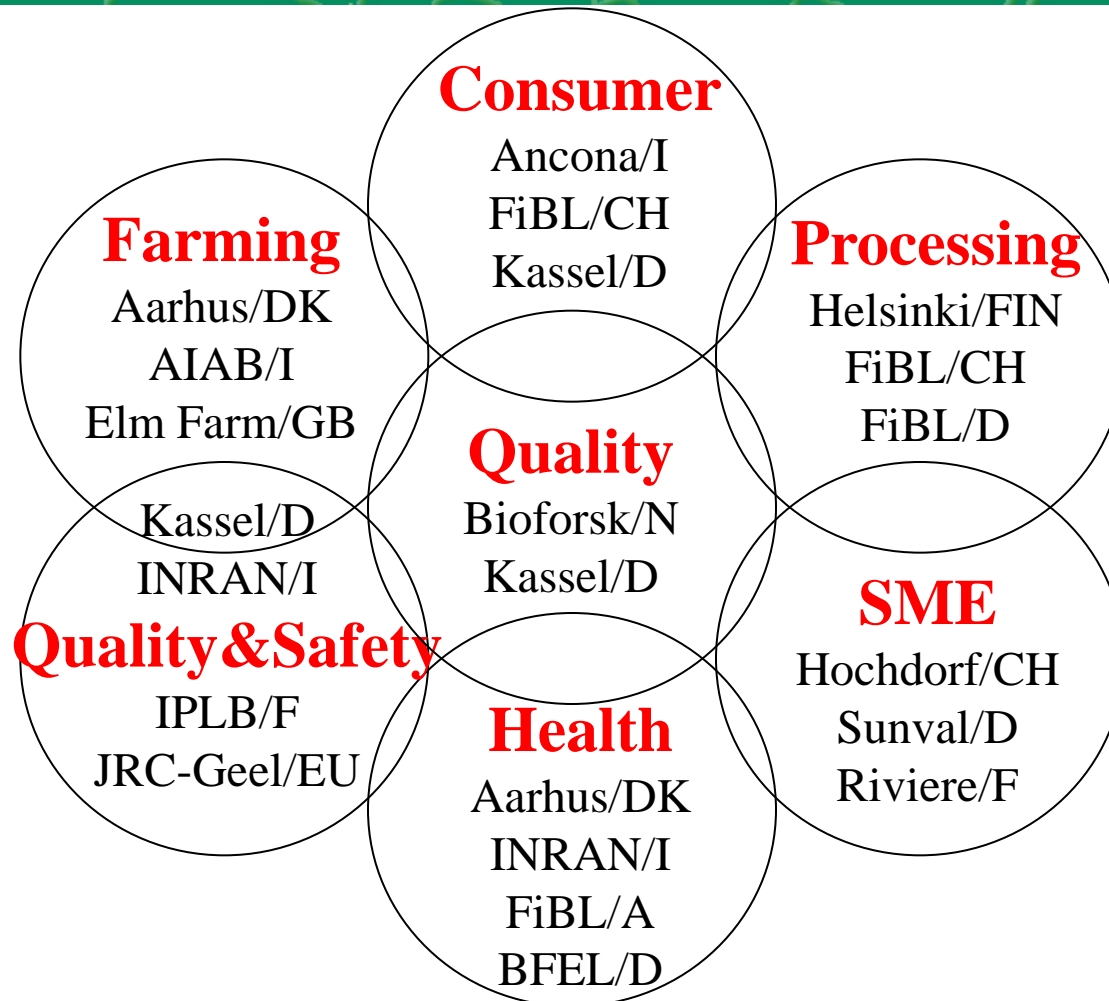
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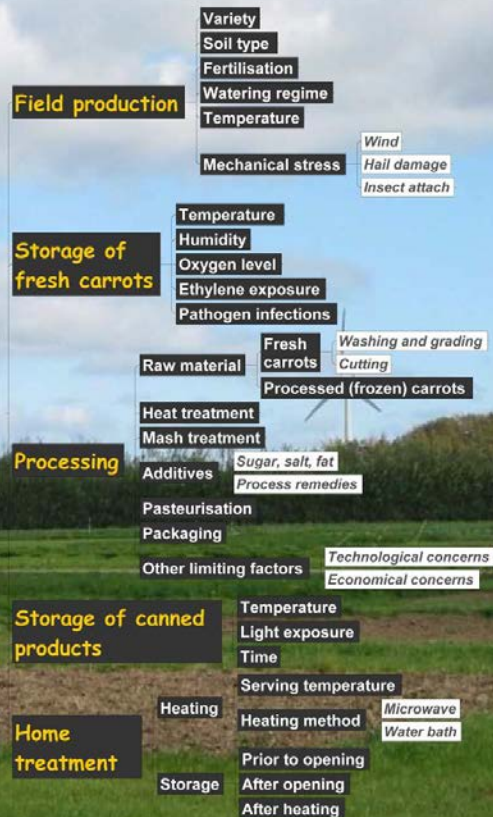


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This figure illustrates the critical steps where quality could be changed during production of a baby food puree product made of organic carrots.



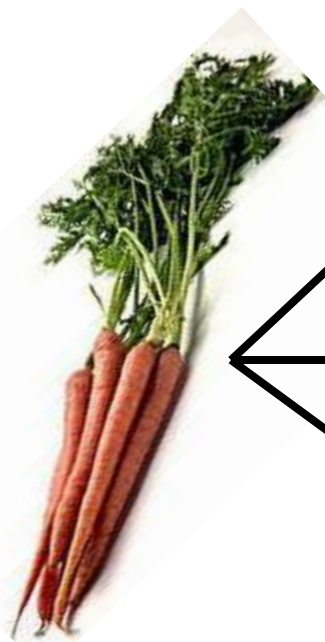
Critical factors in the production chain:
Organic carrot puree for baby food



Core organic, Project no. 2006-1885, Quality analysis of critical control points within the whole food chain and their impact on food quality, safety and health (QACCP)



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Patterns

Sensory
attributes

Nutrients

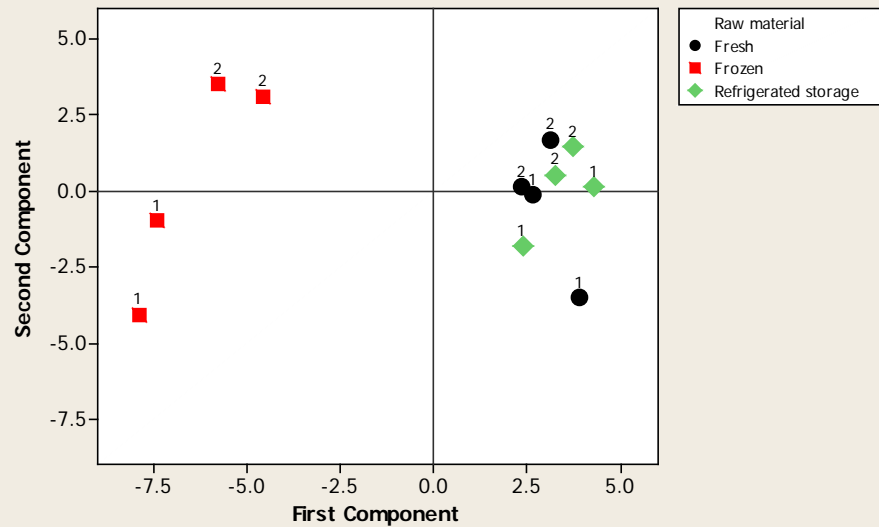


Food as the fundamental unit

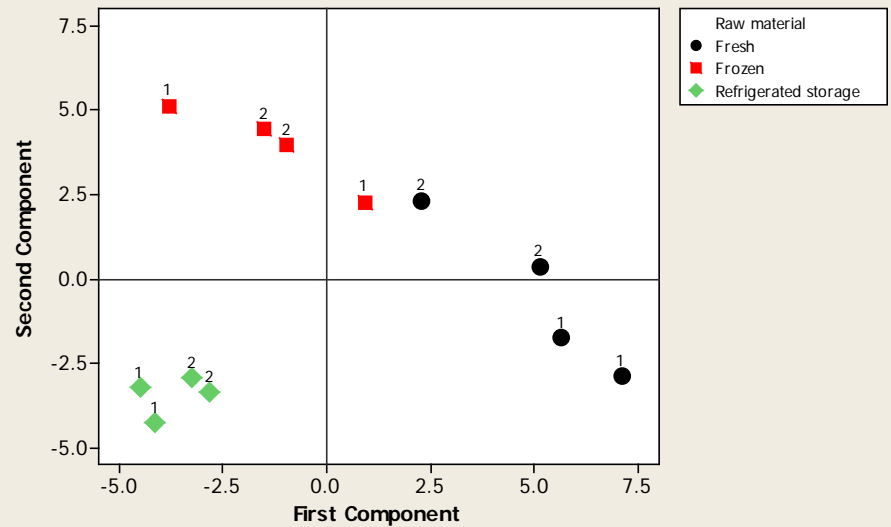


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PCA - Score Plot (correlation matrix; 35 sensory variables)



PCA - Score Plot (correlation matrix; 38 terpener, aroma components)



QACCP identified raw material treatment as critical factor

Freezing the raw material decreases the quality of the final product (carrot baby food)

Using fresh material meets consumers + processors expectations
more natural,
more low-input,
higher quality

Consumers are willing to pay more for the fresh



Take home messages

1. Food authentication: from single compound to patterns (from profiles, fingerprints, spectra, pictures)
2. QACCP is essential to identify key factors for quality improvement and to sustain the market growth
3. Quality evaluation needs a multi-criteria approach (e.g. sensory, nutrition, safety etc.)



End users and countries

Organic processors, retailers, label organizations

Reached by

31 publications

Biofach workshop

Direct communication

In all participating countries (10 by translations into the different languages)



New research question

80% of the food is processed!

EU-Reg. 834/2007: Careful processing methods should be applied

But there is no definition nor detailed regulation in order to select technologies

Careful processing: Code of Practice

Evaluation of technologies regarding careful processing

