

CORE organic

QACCP within the whole food chain
and their impact on food quality, safety and health



Core Organic QACCP Nr. 1885



**QACCP within the whole food chain
and their impact on food quality, safety and health**

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Quality analysis of critical control points within the whole food chain

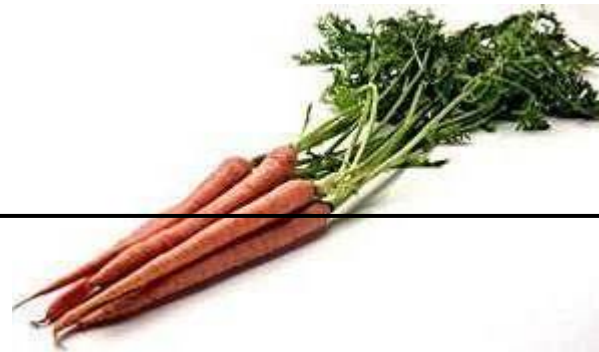
Production

Processing

Trade

Storage, Transport

Consumption



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Definition:

HACCP: Hazard Analysis Critical Control Points

→ A system which identifies, evaluates and controls hazards which are significant for food safety (Codex Alimentarius Food Hygiene Basic)

QACCP Quality Assurance Critical Control Points (Uni Wageningen NL)

QACCP Quality Analysis Critical Control Points (Core organic)

The concept and methodology was adapted to the following quality attributes

Sensory

Nutritional value

Health influencing compounds

Authenticity



Document consumer and processor expectation of organic food quality, in carrot baby food

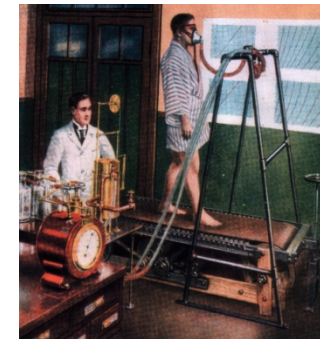
Document the whole food chain and perform a QACCP

Measure the effects of CC points on the safety and quality of the products

Measure the health effect of selected CCPs

Define quality according to the findings

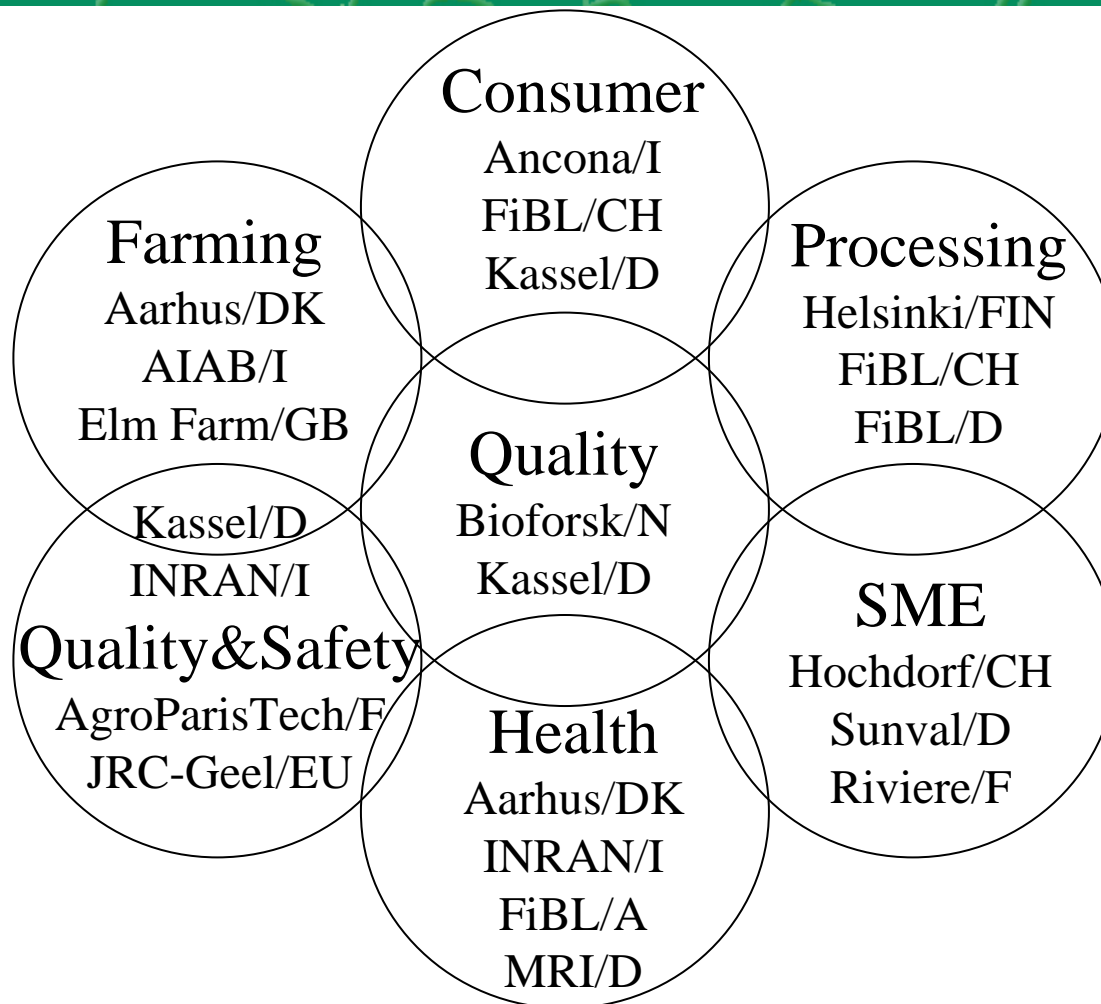
Implement the results and publish them

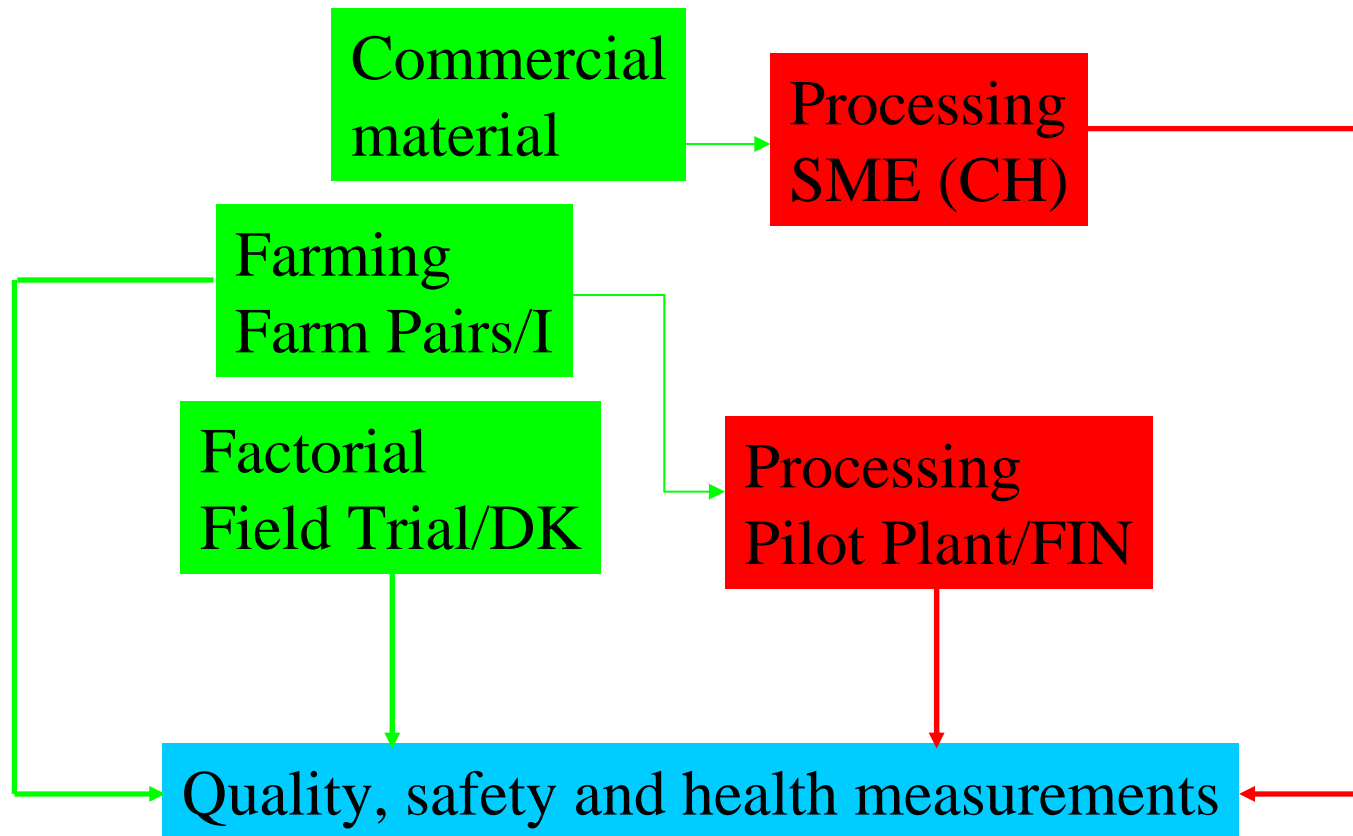


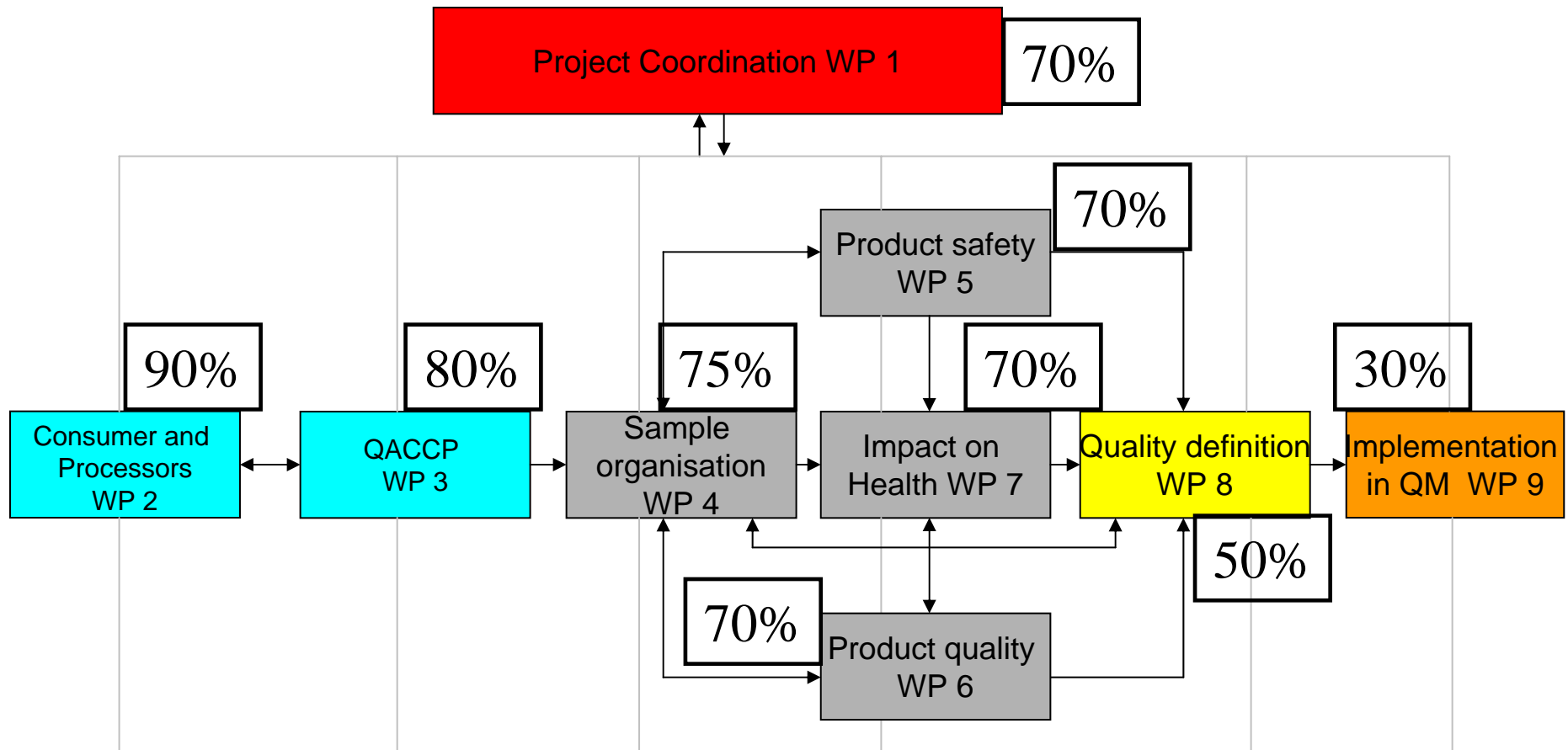
Hypotheses to be tested within the project CORE Organic QACCP

- 1 Carrots from organic and conventional farming systems can be differentiated in a field trial or by comparing carrots from neighbouring organic and conventional farms.
- 2 Organic cropping increases positive quality and health attributes and decrease negative effects on the safety of the carrots.
- 3 Along the organic production chain of carrot baby food critical steps according to quality, safety and health can be identified.
- 4 A Quality Analysis Of Critical Control Points (QACCP) can successfully be performed on carrot baby food and the effects of changes in selected critical control points can be determined.
- 5 The consumer response to the changes can be tested, in order to see if these changes are seen as improvements by consumers and if this affects their willingness-to-pay for the product.









Provisional results most interesting for the organic sector

QACCP as a tool to improve organic food quality

- Whole food chain approach
- Identification of critical quality points, improvement of the quality points and definition critical control points
- Definition of aspects and criteria for quality, safety and health
- Implementation of the QACCP in the existing HACCP concept



Quality Point (QP) Raw material

- Based on the differences of the use of raw material
- Request from the processors survey and the demand of the organic labels
-> **QP was analyzed in pilot plant as well in the industry (SME)**

QP Heat load

- Heat load was measured in the pilot plant as well in the industry test
- Possible optimisation became apparent

QP sterilisation

- Literature study with advantages and disadvantages of the methods



CORE organic QACCP – challenges organic sector

Contribution to challenges in the organic sector

Definition of organic food quality – test of aspects, criteria and methods

Authenticity of organic products – test of criteria

Improvement of organic food quality – QACCP



New research questions from the project

Underline organic food and health claims

Analyse and evaluate production processes from field to fork in terms of these claims

Analyse and evaluate technologies in terms of “careful” processing



QACCP Project

- **European network on organic food quality**
- **Field to fork approach to improve organic food quality**
- **Interdisciplinary team (consumer science, agriculture, food technology, nutrition, health)**

