Is there an organic quality in processing of organic babyfood?
• The selection was done with all consortium members

• Our experts: Baby food companies and additional experts

• Our survey maintained:
  - General attributes of quality for baby food
  - Quality of raw materials
  - Influence of sensory aspects
  - Processing – In order to improve quality
  - Customers
  - Company characteristics

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Definitions of quality:

- Legal regulations

- Higher standards of quality e.g. Demeter, IFS, TÜV, Bioland, BRC or ISO 9001.2000

- Additional food safety: Absence of contaminates, content of nitrate, traceability, storage temperatures etc.

- Additional quality: quality of raw material, nutritional value or sensory aspects.

The farmers: rules of agricultural environmental aid, general food law.

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Quality aspects

- Nutritional aspects
- Food safety
- Packaging
- Shelf life
- Manufacturing technology
- Sensory
- Additives
- Raw material

Processors/experts vs. organic processors/experts
Differences

In the recipe

* additives
* no GMO
* the raw material (residues etc.)
* ingredients as sugar, preservatives

In the processing

• No difference; the same mechanical process

→ Raw material as a semi finished product

FiBL

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Use of raw material

- frozen/ semi-finished
- fresh

frequency of respondents

- Processor/ expert
- Processor/ experts organic

→ Problems in acquisition of raw material
Rating of requirements of raw materials for your acquisition

<table>
<thead>
<tr>
<th>Requirement of raw material</th>
<th>Processors/experts</th>
<th>Processors/experts organic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variety</td>
<td></td>
<td></td>
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<tr>
<td>Grade</td>
<td></td>
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<tr>
<td>Freshness</td>
<td></td>
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<tr>
<td>Origin</td>
<td></td>
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<tr>
<td>Conditions of growing and harvesting</td>
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<tr>
<td>Sensory</td>
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<tr>
<td>Water content</td>
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<tr>
<td>Sugar content</td>
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<tr>
<td>Content of nitrate</td>
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<tr>
<td>Content of residues</td>
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</tbody>
</table>

Processors/experts scored significantly higher than Processors/experts organic for content of residues, content of nitrate, and sensory aspects.
Influence of sensory aspects:

**Pursued product policy:**
sensory standardized baby food  3
sensory variable baby food  5

→ No use of additives for baby food in jars (not allowed by law)
→ Processors have to accept different sensory qualities

Communicate and inform customers within the label about possible variations of the quality of the product due to different characteristics of raw materials
Risky steps according quality

**Raw material**

**Fresh:** Nitrates, residues, heavy metals
Soil contamination

**Semi-finished:**
delivering

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**Baby Food Processing**

1. **Washing**
2. **Peeling**
3. **Cutting**
4. **Cooking**
5. **Mixing**
6. **Bottling**
7. **Sterilisation**
8. **Preserving**

**Thermal Stabilization**
Detector of metal, of broken glass or other contaminants
Optimization of quality

- Nutritional value
- Biologically active substances
- Enriched substances (vitamins, minerals, beta-carotene, etc.)
- Stricter food safety
- Environmentally friendly processing
- Packaging, shelf life
- Processors/experts

Processors/experts organic
Conclusion:

→ Critical and essential product quality parameters, which are useful for optimizing organic baby food quality:

• Nutritional value
  → QCCP: quality of raw material, sterilization
• Food safety
  → QCCP: sterilization, temperature load
• Sensory and organoleptic properties
  → QCCP: quality of raw material

Kathrin Seidel
Thanks a lot for your attention!

For detailed results:
Quality aspects of processed organic baby food
(Report 2008)