Regulatory Framework and Effect on Taste

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Is the Regulatory Framework Affecting Sensory Properties?

- Do standard requirements/differences have a relevant direct or indirect impact on sensory properties?
- If yes, are there really relevant differences in standards and regulations?

Hypothesis:
- Quality guidelines or Codes of Practice of private companies have a higher influence on taste than standards and regulations.
WP 1 Analysis of Regulatory Framework Affecting Sensory Properties – Main Focus

- Main focus on the specific requirements of public regulations and private standards for organic production which affect sensory properties.
- Focus on the new Council Regulation (EC No 834/2007) and the related rules for implementation (EC No. 884/2008)
- In addition, the most important private standards and governmental regulations for organic food and farming in the countries involved will be analysed,
- Main phasis of the analysis will be on the requirements for processing (e.g. use or non-use of specific additives).
Underlying Principles for Organic Food Processing

Concepts of organic food processing
- Organic ingredients
- Certified production chain
- Minimised use of additives
- Careful processing, freshness
- Healthy nutrition, natural concepts
- Environmental friendly processing and transport
- Socially responsible, fair trade, regionality

Basic principles

Broadly shared principles

Principles in discussion

Source: EU project Quality of low input food, 2006
## Relevant Standards Restrictions with Impact on Taste: Animal Products

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<td><strong>Milk products e.g. yoghurts</strong></td>
<td>Exclusion of artificial flavours, No lactic and other non-milk based acids; No natural flavours at all</td>
<td>Exclusion of plant based thickeners, restricted sugar;</td>
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<td><strong>Melted Cheese</strong></td>
<td>No phosphates (instead citrates)</td>
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<td><strong>Meat products</strong></td>
<td>No phosphates, No glutamates; Restricted use of nitrates/ nitrites &amp; Ascorbates</td>
<td>No flavours (even not natural ones), Exclusion of nitrates/ascorbat es</td>
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Standards Restrictions as a Chance to Search for Innovative Processing Concepts

- The strong restrictions for additives and the minimal processing concepts is an incentive for searching new innovative methods, e.g. the use of functional ingredients
  - *See example: ice cream, yoghourt.*

- Furthermore, requirements for raw materials regarding ripeness, freshness, fertilisation contribute to taste
Freshness: Taste and authenticity

- Fresh, ripe fruits
- Fruits without flavour

Source: P. Gallmann, ALP, 2000

www.ecropolis.eu
Non dairy emulsifiers: E322, E471, E472, E475, E477, E473, E474

Parts of the milk fat globule membrane

Ice cream process:
milk origin emulsifiers replace the proteins at the O/W surface

Ice cream:
• optimised texture
• slow melting rate
• desired sensory properties

butter process

buttermilk

concentration by MF/UF

concentrated buttermilk approx. 18% fat

Source P. Gallmann, ALP, 2000
Minimal processing: buttermilk replaces emulsifiers

Effect of added buttermilk concentrate on „creaminess“ (crosswise) and „mouthfeeling“ (diagonal).

Source P. Gallmann, ALP, 2000

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Preliminary Thoughts

- In **production standards** both EU Regulation as well as private standards have almost no restrictions, which have a direct or indirect impact on taste.

- In **processing**, by the fact that **only very few additives can be used for organic food** based on EU Regulation 834/2007 ff – some acids, preservatives or thickeners or flavour enhancers cannot be used.

- Most **differences will be in processing standards of private organisations** (e.g. Bio Suisse, Demeter, Bioland), which restrict processing methods as well as some additives (e.g. ascorbic acid).

- Some company have **internal quality management standards** for their producers, which influence taste,
Questions for Discussion in Plenary

➢ Must organic products be the same like conventional ones or should they have an own sensory and quality profile?
➢ What are the most relevant production or processing restrictions for optimal taste from a company perspective?
➢ Would it be desirable that private organic label organisations develop Organic Quality Management Guidelines or Code of practices (which can be developed to a Code of Conduct for all members)?
➢ Which firm/enterprise has special quality requirements/guidelines which are interesting for the project?
➢ Please communicate with us – we will keep you informed regularly about the project outcomes
Interesting Taste Assurance Concepts

- Which firms/enterprises have special quality requirements/guidelines, which are interesting for the project
- Please communicate your own requirements to us – we will keep you regularly informed about the project outcomes
- Contact for standards issues:
  - Otto Schmid, FiBL : otto.schmid@fibl.org