

FQH - Research Agenda - October 2008

Introduction

The FQH Association (14 members - research institutes working on the topics of food quality & health - in 9 European countries) aims to stimulate research on the subject of organic food quality and health. In this context it is relevant that the practice, and connected agricultural science, of organic agriculture is characterized by a systems approach.

Broadly accepted is the statement in 1943 by Lady Eve Balfour (1899 -1990) "A healthy soil leads to healthy plants, which lead to healthy animals, and both lead to healthy food, to bring forth healthy humans".

When dealing with organic food quality and health, the concepts of 'quality' and of 'health' need to reflect this systemic view.

In terms of research FQH intends to stimulate the development of a 'scientific community' that performs scientific projects on the topics:

- Development of concepts for 'quality' and 'health' that do justice to organic systemic thinking.
- Development of methods to measure these concepts in reality through (partly new) quality parameters.
- Plant and animal research in relation to the concept(s) is needed.
- Research on health effects of products of best, good and minor quality.

All according to scientific rules of conduct, aiming at validation and publication in high ranked scientific journals.

1. Conceptual development

Conceptual development is needed concerning basic concepts like 'holistic' versus 'systemic', as well as 'nutrition', being broader than the mere intake of nutrients.

Secondly organic 'food quality', related to food products needs conceptual development.

Connected concepts are 'authenticity', 'naturalness', 'coherence', 'organisation'.

Thirdly conceptual development is needed concerning 'health' and related concepts like 'resilience', 'robustness' and 'self regulation' or 'self organisation', in a sense that connects to the systemic views in organic thinking.

These concepts need to be operationalized and validated according to scientific standards.

2. Development of methods to measure this/these (concepts of) quality

Evaluation, improvement and standardisation of (new) methods to assess the defined quality of organic produce is needed. This includes conventional but also holistic quality assessment methods (like the biocrystallization method and others).

Validation is necessary through the accumulation of references, in relation to different production conditions.

Insight needs to be developed in the relation between production measures and quality.

When holistic methods are used it is of great importance to link these to analytical data.

Strive to connect analytical, as well as holistic outcomes to health endpoints.

3. Plant and animal research in relation to the concept(s)

On the one hand reworking on and integration of already existing results from crop and animal research into the new concepts is needed. Secondly new research is needed to establish references for quality, in relation to cultivation practices.

4. Choice of study designs to measure effects of quality on health

Evaluation, improvement and standardisation of (new) methods to assess the effects of defined quality on defined health parameters.

First these parameters (biomarkers) need to be identified in relation to the test objects.

Different subjects can be identified for health research:

1. Human studies
2. Animals studies, with different types of animals
3. Studies with simple organisms like bacteria etc.

In these different levels, types of research can be accomplished:

1. Intervention studies
2. Observational studies
3. Studies to explore working mechanisms, like in vitro studies

Note: from 1. to 3. decreasing strength of convincing evidence: intervention studies in humans are most convincing.

However, different types and subjects of study are needed and together will build a strong 'body of evidence' about the effect of good quality food on good human (and animal) health.