

# International activities

## Participation in international activities

- 2008-2011 ProPraline EU project: Nr: 218423  
Structure and processing for high quality of chocolate pralines (Research for the benefit of specific groups. Research for SME associations/groupings)
- 2009-2012 DREAM is a trans-disciplinary partnership involving two multinationals and nine countries, which will develop realistic, physical and mathematical food models for use as standards to be exploited across all major food categories to facilitate development of common approaches to risk/benefit assessment and nutritional quality in food research and industry.
- 2008-2010 WINDAIR EU project: LLP LdV T01 2008 FR-117-011  
Transfer of modular courses on the quality of food production for small and medium sized food companies HACCP-hygiene/traceability - Food safety in Hungary and Romania.
- 2006-2010 TRUEFOOD (TRaditional United Europe FOOD), EU project: N-016264-2;  
Improvement of the quality, safety and marketability of traditional foods by innovative methods, including consumer studies, chemical and microbiological risk, and aspects of sustainable food production. Technology transfer for SME's.
- 2005-2008 HELENA EU project:  
Investigation of the nutrition attitudes of adolescents. HELENA will provide data about attitudes towards nutrition, and the main determinants of food choice and preference, among male and female European adolescents. Development of food products with positive health effects for adolescents and sensory characteristics that are attractive to adolescents.
- Ministry of Agriculture and Rural Development (MARD, Hungary). In preparation for Hungary's accession to the EU, Campden BRI Hungary Ltd provided technical assistance in several areas related to the food industry.
- 2007-2009 INPLISTA EU SSA project,  
EU-funded project aimed at providing information about food quality and safety standards for EU-based small and medium sized enterprises.
- 2005-2006 SMEs-Net EU SSA project,  
Campden BRI Hungary Ltd took part as a technical partner of the Federation of Hungarian Food Industries in carrying out a survey about R&D needs of food SMEs and the barriers to their involvement in innovation.
- European Technology Platform (ETP) "Food for Life" and Hungarian Food Technology Platform. Promotion of food related innovation in Europe and in Hungary.

- 2004 SAPARD programme (EU).  
A review of the current status and analysis of the needs for EU and government support was carried out in several branches of the food and drink industry (including canning, freezing, fruit juice, flour milling, confectionery, pasta manufacturing, soft drink and mineral water etc.). Aspects of hygiene, technical level, product range and technical support were considered, and used for the development of the country's food industry strategy.
- 2000-2001 Phare programme (EU).  
For restructuring measures and investment appraisal related to EU accession and increasing competitiveness of the processing of agricultural products. Campden BRI Hungary Ltd was a member of the winning consortium, and leader of the subproject for fruit and vegetable processing. Carried out on behalf of the Ministry of Agriculture and Rural Development (MARD, Hungary).
- Phare programme (EU) on the identification of geographical origin. Expert advice was provided.
- 2000-2005 Phare programme (EU), led by the Confederation of the Food and Drink Industries of EU (CIAA), 2000-2002. To strengthen the activities of the Food and Drink Industry Federations by helping CEEC companies. 7 sector-specific GHP codes have been developed for Hungary under the leadership of Campden BRI Hungary Ltd, in close collaboration with the CIAA and the Federation of Hungarian Food Industries (ÉFOSZ). A frozen food code was developed in English in discussion with Czech and Polish Federations. Seminars and training were also provided in Hungary, Poland and the Czech Republic.
- Technical guidelines and information leaflets about EU requirements and training courses have been developed.
- Campden BRI Hungary Ltd is represented within the
  - Scientific Advisory Board of the Hungarian Food Safety Office
  - Food Safety Committee of the Federation of Hungarian Food Industries
  - Food Research and Food Hygiene Expert groups of the CIAA on behalf of the Federation of the Hungarian Food Industries
- 2003-2004 Phare programme (EU) led by the Confederation of the Food and Drink Industries of the EU (CIAA). Training and expert assistance for the food federations of ten new EU accession countries in upgrading the level of implementation of Good Hygiene Practice. Campden BRI Hungary Ltd is a collaborating partner in this programme.
- 1999-2007 UNIDO funded projects were carried out in Romania, Ukraine, Serbia, Croatia, Macedonia and Eritrea to promote the application of food safety and quality management systems.
- PRAQ III. Programme. Expert advice was provided for different sectors using UK experts.
- European Sensory Network (ESN). A major conference on sensory science was organised in Budapest.

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Campden BRI Hungary Ltd, H-1096 Budapest, Haller u.2, Hungary

Tel: +36 1 433 1470 Fax: +36 1 433 1480 [www.campden.hu](http://www.campden.hu)

Campden BRI, Station Road, Chipping Campden, Gloucestershire, GL55 6LD, UK

Tel: +44(0)1386 842000 [info@campden.co.uk](mailto:info@campden.co.uk) [www.campden.co.uk](http://www.campden.co.uk)

# Publications

## A set of publications on HACCP and GHP is available in Hungarian

Within a project funded by the Ministry of Agriculture and Rural Development (MARD, Hungary), Campden BRI Hungary Ltd as a technical expert organisation representing the Federation of Hungarian Food and Industries (ÉFOSZ) developed 23 sector-specific voluntary guides to good practice for hygiene and for the application of HACCP principles according to EC Regulation 852/2004 with industry panels.

The first two Hungarian Good Hygiene Practice (GHP) Industry Guides were developed in close cooperation with the canning and bakery trade associations, with the support of the MARD, Hungary and the National Committee for Technical Development. Campden BRI Hungary Ltd led both industry working parties developing the guides. The guides contain recommendations for good practice together with references to current Hungarian food hygiene regulations.

A series of seven sector-specific GHP guides (flour milling; dry pasta; confectionery; pickles and acid preserved foods; fruit juice; prepared fruits and vegetable; and frozen foods) were published in collaboration with the Federation of Hungarian Food Industries within a project funded by the European Commission, led by the Confederation of the Food and Drink Industries (CIAA). Two further GHP guides were developed as a part of a major project funded by the Hungarian National R&D Programme (retail; handling of frozen fish).

A simple illustrated HACCP booklet is a useful tool for operators, SMEs, and training of suppliers. It is written in Hungarian, but has been translated and can be printed on request in English. In addition, the illustrated Simple HACCP in catering was published in collaboration with the Hungarian Small Caterer's Association (KISOSZ).

A Good Manufacturing Practice Guide provides a general overview of the requirements for the whole industry.

A set of Campden BRI (UK) guidelines has been translated into Hungarian and adapted to reflect Hungarian practices, with the support of the MARD, Hungary.

- *Water quality for the food industry. An introductory manual* (1998), Guideline 21
- *Product development guide for the food industry* (1996), Guideline 8
- *Guidelines for the prevention and control of foreign bodies in food* (1995), Guideline 5
- *Guidelines for the design and construction of walls, ceilings and services for food production area* (1994), Technical Manual 44
- *Guidelines for the design and construction of floors for food production area* (1993), Technical Manual 40

**Additional publications include:**

- A booklet about the general requirements of assured/labelled fruits and vegetables.
- A collection of pictograms used on food labels.
- A food labelling guide.
- 23 EHEDG (European Hygienic Engineering and Design Group) guides translated into Hungarian.

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# Training courses

## Workshops and training for companies operating in Europe

On demand we are able to organise courses specifically tailored for a given food sector:

### **HACCP (Hazard Analysis and Critical Control Point)**

Registered by the Royal Institute of Public Health (RIPH), UK and the Royal Society for the Promotion of Health (RSPH), UK. The workshop nature of the course, with case study exercises in groups, ensures an understanding of the terminology used. Experienced tutors advise on implementation. Since 1994 more than 200 such courses have been organised for participants from the Hungarian food industry and authorities.

Since 2006 our trainers have participated as co-tutors in more than 40 EU DG SANCO HACCP training courses funded by the EU Commission and organised by Campden BRI for the food control authorities.

### **Advanced HACCP**

Provides HACCP team leaders, management personnel and system auditors with advanced HACCP training beyond that given in the workshop on the application of the principles of HACCP. The course covers practical implementation, validation and maintenance of HACCP systems.

### **How the HACCP system should be operated**

Aimed at those companies which have already developed the HACCP system but have operational difficulties. The participants can obtain skills related to the most important elements of the practical application of an existing HACCP system. During the training using practical examples we explain how the employees should be involved in the operation of the system. Controls and documentation that are essential for effective operation and system verification or approval are also explained.

### **HACCP - Basics for the agri-food sector**

Enables delegates to obtain an introduction to the principles of HACCP and the practicalities of implementation in the agriculture and horticulture sector. This is a practical course applicable to all sectors of the agriculture primary product industries (including fresh produce, grain storage, animal feed).

Optional RIPH Level 1 examination. BASIS points can be applied for.

### **ISO 22000 - Understanding of the requirements**

Focuses on the technical requirements of ISO 22000 and makes comparisons with ISO 9001:2000 and the BRC Global Standard – Food. It enables delegates to gain an awareness of the requirements.

### **Traceability - Understanding the requirements**

The EU Regulation 178/2002 requires traceability to be established at all stages of the food chain. This course will cover the establishment and implementation of a traceability system based on first principles, with special reference to food raw materials and the agri-food sector. The course will be suited to those starting and managing traceability systems, and those assessing their supply chains, including those responsible for procurements of raw materials, quality assurance, and technical and supply chain management. Those of a non-technical background will also find it a useful insight into issues relating to identity preservation and traceability.

### **BRC standard issue 5 - requirements**

Designed to give participants an understanding of the latest version of the BRC (British Retail Consortium) standard (will be implemented from 1st July 2008) as preparation for subsequent certification of their manufacturing facility.

### **IFS standard version 5 - requirements**

Designed to give participants an understanding of the latest version of the IFS (International Food Standard) focusing on the new requirements KO criteria, the risk analysis and system approach of the standard requirements and practical implementation of the standard. As food businesses can be evaluated and certified against version 5 from 1st January 2008, this course is a good tool to prepare for the subsequent certification.

### **Internal auditor training**

Internal audit is an increasingly important tool for monitoring the effectiveness of application of quality systems. This course has been designed to help delegates improve their competence and understanding of the audit methods.

### **Introduction to product development**

Suitable for all people with responsibilities concerned with new product development. The course provides valuable understanding of the reasons for, and means for successful progress within NPD activities.

### **Hygiene in engineering**

Hygiene in food manufacture is undeniably of critical importance. This course contains information relevant to hygienic design engineering as one of the major elements in achieving hygiene in manufacturing.

### **Cleaning and disinfection**

An essential practical course designed to give participants the knowledge necessary to achieve effective cleaning regimes.

### **Basic microbiology**

Anyone in a responsible position in the food industry requires a basic grasp of microbiological concepts. This course will help the technologists, managers, etc to understand basic microbiological concepts in order to make better-informed decisions and avoid error.

### **Advanced microbiology**

This course aims to explain microbiological methods and their validation, challenge tests, shelf life testing and predictive microbiology. This course is designed for the microbiology enthusiast and will complete the microbiology training of senior laboratory personnel.

### **Allergen control - a practical approach**

This course aims to explain to delegates the main food allergens and their importance, the legislative requirements for labelling food allergens, the identification of allergen hazards and evaluation of the allergen risk. The series of practical exercises will reinforce lectures and give delegates the opportunity to discuss and test their knowledge in a hands-on practical training environment before having to apply the knowledge within their own company.

### **General food law course**

Besides the essential theoretical basics, our course provides practical help in the interpretation of the general food law. We can give a wide-ranging introduction for third countries to the EU law controlling food and drink manufacture and marketing. A part of the program of these courses focuses on the specific regulations concerning the client's field and covering the most appropriate topics. On a course for the third countries we can highlight the certain details referring to the non-EC countries in the legislation.

### **Food labelling course**

Food labelling is the main means of providing for consumer information, and hence is very strictly controlled. Our course provides insight into the application and interpretation of the EU's food labelling legislation. Delegates will learn how to prepare a food label covering the requirements of EC countries. Among the main topics participants will learn the aim of the labelling regulations, the naming of products, allergen declaration, weight declaration, date marking, nutrition and health claims etc.

### **Supply chain management (from October 2008, in collaboration with Ghent University, Faculty of Bioscience Engineering, Department of Agricultural Economics)**

This course is designed to create a managerial perspective of the core tasks and challenges required to effectively manage supply chains. It focuses on the bottlenecks and success factors of supply chains, the functioning of different supply chain structures and the optimal supply chain design, measuring and enhancing supply chain performance, distribution problems and innovative distribution systems. It is recommended not only for food manufacturers, but also for their suppliers of raw materials, and for the suppliers of agricultural machinery etc.

The course is the first of a set of modules on supply chain management techniques.

### **Basic sensory training course**

The course is aimed at delegates who have little formal experience of sensory science and wish to understand the basic principles involved in using sensory evaluation effectively in the workplace to meet their own objectives. It will also help delegates to understand their own sensory acuity, through a series of practical sessions, and further develop their own descriptive ability.

### **Advanced sensory training**

Provides delegates, who are either new to sensory science or wish to develop their skills, with a thorough overview of sensory evaluation so that they can maximise the use of this discipline within their working environment. Discrimination, descriptive and affective sensory methods will be discussed and illustrated using carefully selected practical examples.

### **Food chemistry for non-food chemists**

Enables delegates to obtain strong basics of food chemistry. This is a useful course in which the participants can obtain information regarding the most important food ingredients such as: proteins, vitamins, minerals, additives, dietary fibres, oils, carbohydrates etc. It also focuses on the chemical structures of the chemicals and their role. The course gives a short overview about the determination methods.

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# Food technology R&D services

## for the food industries in Hungary and Central and Eastern Europe

Campden BRI Hungary Ltd. is a Research and Development Organisation with a unique range of training, technical expertise, and services available to the food, drinks, and allied industries in Hungary and in Central and Eastern Europe. The extensive resource of the parent organisation, Campden BRI (UK) provides additional benefit.

1. Food technology: R&D and related technical and troubleshooting services
  - Frozen foods, all aspects of manufacturing technology and product and process control
  - Heat preserved foods: application of Good Manufacturing Practices, process validation and temperature distribution studies.
  - Chilled foods: Good Manufacturing Practices for safety in the production and distribution of chilled foods; applications of Modified Atmosphere Packaging
  - Factory hygiene: cleaning and sanitation programmes, hygienic design, specification and monitoring.
  - Factory design.
  - Foreign bodies: advice in the avoidance, elimination and identification of foreign bodies; access to the extensive library of glass spectra at Campden BRI (UK).
  - Troubleshooting: investigation into problems of manufacture and distribution.
  - Primary production: Good Agricultural Practice; HACCP approach.
  - Flour milling, baking and cereal processing, with access to extensive pilot processing facilities (UK)
  - Microbiological advice relating to product safety and spoilage; factory design and operation; microbiological risk profiling.
  - *Waste management*
  - *Cost reduction techniques*
2. Information and legislation services  
Regular information on Hungarian, European and other international food legislation; assistance in problem solving of technical issues related to food legislation; legal review of labels on Hungarian, English, German, Russian, Italian, Slovakian, Slovenian, Czech, Romanian languages.
3. Food safety and quality management verification, auditing and training, including HACCP, GMP and ISO 9000 supplier assurance schemes, Good Agriculture Practice. Factory inspection and audit against standards such as BRC, IFS, ISO 22 000 or national sector specific GHP codes prepared under the leadership of Campden BRI Hungary Ltd. Technical advice for development of assured/labelled systems for plant and animal food chains and for traceability systems throughout the whole food chain. Advice, audit and quality monitoring services for supplier assurance systems.

4. Consumer preference and market information. Food product intelligence, consumer tests according to Hungarian and international perspectives, and expectations.
5. Product development from concept to factory trial, with access to a wide range of pilot processing equipment at Campden BRI (UK).
6. Product and process specifications. Advice in meeting regulatory and commercial requirements of Hungarian and Western European retail organisations.
7. Sensory evaluation for New Product Development and Quality Control in a well equipped laboratory accredited against MSZ EN ISO/IEC 17025:2005.
8. Training. A unique range of scheduled or company specific courses and workshops, relevant to the Hungarian and European Food and Drinks Industries are provided to cover all of the above areas.
9. Business services. Inter-company contacts and business introductions.  
Campden BRI (UK), through personal and business contacts, has developed close links with all sectors of the Hungarian food and associated industries, individual companies, trade associations and councils, relevant government departments and universities, greatly facilitating contact, at appropriate levels, with UK organisations should this be required.
10. Assistance in access to European R & D programmes  
Campden BRI (UK) is ideally qualified and situated to identify project areas, provide technical and management inputs and identify industrial partners wishing to participate in the 7th Framework programme or other European research programmes.

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# Supplier scheme support

A comprehensive range of services is offered for companies wishing to improve the services of their suppliers in Central and Eastern Europe. Services cover food safety and quality management, product development, consumer preference and training aspects. Help may be provided from staff speaking Hungarian, English, German, Russian, French and Italian.

The following services are available:

- Verification of and training on HACCP systems.
- Auditing of HACCP systems - auditing according to BRC/IFS/ISO 22000 standards.
- Verification, auditing and training on IFS systems
- Developing supplier assurance systems specifically adjusted for needs of clients (e.g. manufacturers / retailers / caterers).
- Verification, auditing and training on
  - traceability systems
  - assured systems for agriculture (including catering, agriculture, retailing).
- Developing company Good Hygienic Practice codes.
- Developing and monitoring specifications.
- Checking legality of Hungarian, English, German, Russian, Italian, Slovakian, Slovenian, Czech and Romanian labels (in Hungary).
- Monitoring quality of products including sensory properties.
- Sensory benchmarking.
- Measuring consumer preferences.
- Assistance in developing project applications for national and international funding schemes to support new product development, process development and improvement of factory hygiene of suppliers.
- Training of management and staff in all above aspects.
- Training of suppliers
- Troubleshooting

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# Sensory and consumer services

## CONSUMER SERVICES

Campden BRI Hungary Ltd's consumer science capabilities offer good support using a wide range of consumer methods according to the expectations of clients from all over Europe. Consumer tests are also carried out in a business-to business environment.

Campden BRI Hungary Ltd's facilities provide the same sensory services that are available at Campden BRI, UK, thus making it possible to carry out comparative studies in at least two parts of Europe. The services incorporate both sensory analysis and market research in an integrated approach product quality checking, product development and product optimisation.

- **Qualitative Research:**  
focus group discussions, in-depth interviews and using observational techniques.
- **Quantitative Research:**  
home use tests, central location tests, Internet surveys, market segmentation tests, preference mapping and laboratory tests.

## SENSORY SERVICES

**A well-equipped sensory laboratory has been operating at** Campden BRI Hungary Ltd. under the guidance of Campden BRI, UK Sensory and Consumer Team.

The sensory laboratory and its preparation area comply with international and national standards. The laboratory is accredited to MSZ EN ISO/IEC 17025:2005 and is a member of ESN (European Sensory Network).

- **Descriptive analysis:** NAT accredited qualitative descriptive analysis, rapid attributes profiling and flash profiling.
- **Discrimination testing:** triangle tests, taint testing, ranking tests.
- **Sensory quality grading.**
- **Product benchmarking.**
- **Specialist sensory and consumer research for:**
  - Beer and wine industries
  - Spirits industries
  - Frozen food industries
  - Canning industries
  - Bakery industries
  - Confectionary industries
  - Meat industries.

## CONSULTANCY AND TRAINING ACCORDING TO CLIENTS' NEEDS "TAILOR MADE"

- Basic sensory training course
- Advanced sensory training course
- Introduction to sensory analysis for people working with marketing

### Sensory and consumer science research interest to provide solutions for Client

#### Health and diet

- Consumer attitudes towards health food and diet,
- Consumer issues around labelling of the food items mainly healthy products

#### Attitude and behavioural studies with:

*Target groups: Children, Adolescents and Adults (mothers)*

- Influence of the situation on the food choices and preferences
- Influence of personality on the food choices and preferences
- Understanding of consumer purchasing behaviour
- Understanding of the members of the supply chains from the supply chain performance factors point of view

#### Cross cultural studies and collaboration research

- On traditional food items: Truefood,
- On healthy eating habits and behaviour of adolescents Helena,
- On taint recognition: CalibSensory
- Sensory panel check monitoring: ProfiSens, etc.
- Packaging acceptance among countries
- Odour preferences among countries

#### Consumer tests in business-to business environment

- Measurement of innovation capacity, collaboration activities among supply chain members
- Supply chain performance

#### Product innovation

- Food reformulation eg. reduced salt, sugar
- Determination of limits of the acceptance of product defect on vegetables and confectionary products
- Prediction of consumer liking regarding novel healthy products

#### Understanding the relationship between instrumental and sensory data

- Relationship between colour and sensory assessment on colour eg. red pepper
- Relationship between texture and sensory assessment on texture eg. praline

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# Improved international competitiveness

New technologies and methods for improving the international competitiveness of Hungarian food products including consumer protection aspects

*Project funded by the National Research and Development Programme of the Hungarian Government. 2001-2004 (NKFP 4/013-2001). Led by Campden & Chorleywood Hungary, the project was carried out by a consortium of a university, 8 food manufacturers and a retailer.*

The aim of this research was to develop the implementation of new technologies and test methods in Hungary that will add value to food products and improve food safety.

## Objectives

- Development of minimally processed chilled and MAP products.
- Development of new added value frozen vegetable and fruit products.
- Introduction of new methods for improving food safety and development of models for practical application:
  - demonstration models
  - predictive microbiological models
  - validation of microbiological safety
  - challenge testing
  - developing GHP codes
  - improving cleaning methods
- Establishing a new range of sensory services available for Hungarian food manufacturers.

## Achievements

- **Modern sensory laboratory** and related network of factory laboratories.
- **Shelf life investigations** of chilled and MAP packed fresh fruit and vegetables, as well as processed and chilled poultry products (investigation of raw materials, quality, temperature, packing materials, modified atmosphere, applications for fresh produce washing), with significant increase of shelf life of some products (sour cherries, peppers and 2 poultry products).

- **Development of the main process steps of the new processing technologies for fruits and vegetables** (varieties and planting methods, cutting, peeling and drying methods of sensitive fruits; cooling and transporting of fine chopped vegetables, grilling method of vegetables).
- **Development of more exact sensory evaluation methods** (detailed description of properties; benchmarking techniques; photographic aids and illustrations; validation of sensory evaluation methods by statistical analysis; improved product specifications; testing more than 300 products).
- **Validation of microbiological safety** (application of validation methods for the microbiological safety of two minimally processed middle heat treated products; microbiological investigations of minimally processed vegetable and chilled poultry products).
- **Improved cleaning method** to prevent cross contamination with *Listeria* (identification of the potential sources; improved cleaning and disinfection methods).
- **Technology transfer for the food industry** (training of more than 30 experts; one chapter of a book for safety of chilled food and technologies; 2 good hygiene practice guidelines; new training seminars for chilled and minimally processed foods; microbiological methods and novel sensory methods).

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# Traceability system design

Campden BRI offers a simple, cost-effective and flexible traceability system verification service that is rapid to implement and provides for legislative and customer requirements. It is suitable for all companies who need to establish the farm-to-fork product chain of ingredients and products.

EU Regulations require traceability at all stages of the food chain. Food businesses are required to

- Identify where raw materials have come from
- Identify the businesses to which products have been sold
- Make such information available on demand

In addition, industry best practice and management standards require identification of what has happened to the materials in the food business operation.

Experience has shown that in many cases problems can be linked to non-systematic design of flow of information between parts of the food chain or process steps, or the recording of information that is too complex for a specific unit operation.

## Approach

A simple, structured approach is offered for assessing and prioritizing information flow between suppliers and the different steps of the production processes of food businesses and customers. Account is taken of relevant legislation, standards, and finished product specifications (company/customer) and management system standards such as BRC, IFS and GLOBAL-GAP, ISO 22 000.

The concept is based on prioritizing the information that has to be made traceable and retrievable and on eliminating information that increases complexity, costs and potential for traceability system problems.

The Campden BRI service utilizes a specified sequence of consecutive steps using forms designed to facilitate analysis and documentation. Systematic procedures address: objective; scope; team; product/process description; due diligence requirements; unit of traceability; analysis of information flow; and summary of information needs.

## Implementation

Steps typically involve:

- Setting objectives
- Specifying requirements
- Analysis of the system
- Specification of the necessary measures and tools
- Implementation of measures
- Verification of efficiency of changed systems in practice
- Review and adjustment

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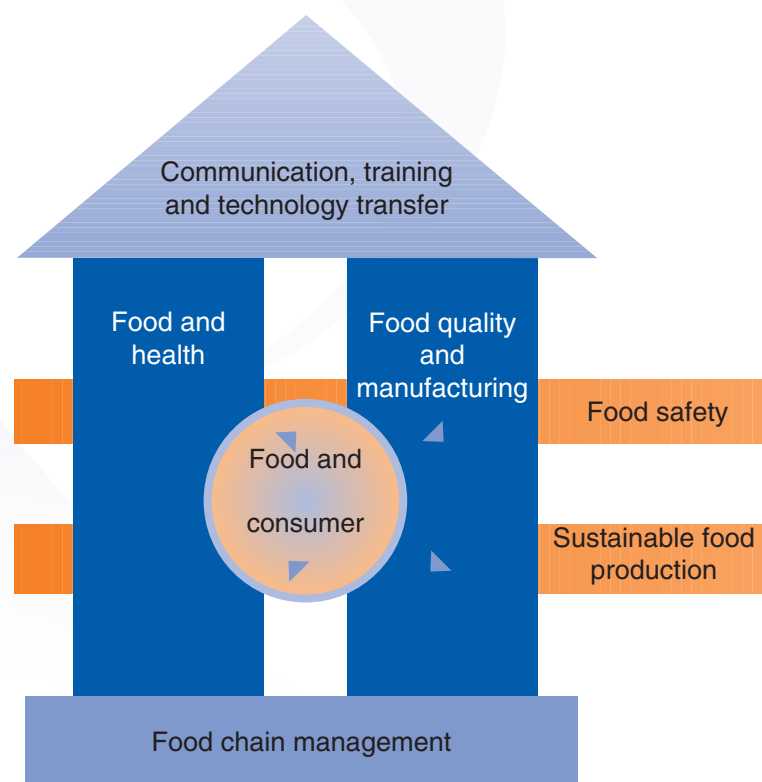
## European Technology Platform (ETP) “Food for Life” and its national platforms

The European Commission is facilitating the establishment of European Technology Platforms in key economic sectors to strengthen innovation in Europe and improve competitiveness. Within the industry led ETPs key holders work together and develop a long term vision of the sector; create a strategy for delivery and make joint efforts to help the implementation of the results.

The European Technology Platform (ETP) “Food for Life” was created under the auspices of the Confederation of the Food and Drink Industries of the EU (CIAA) in 2005 and a “Vision for 2020 and beyond” was developed and published in July 2005.

The vision aims at an effective integration of strategically-focussed, trans-national, concerted research in the nutritional, food and consumer sciences and food chain management so as to deliver *innovative, novel and improved food products for, and to, national, regional and global markets in line with consumer needs and expectations.*

**Figure 1. European Technology Platform Food for Life**



These products, together with recommended changes in dietary regimes and lifestyles, will have a *positive impact on public health and overall quality of life* ('adding life to years').

A Strategic Research Agenda (SSRA) was developed by specific working parties and through wider national and regional consultations. The objective is to provide input into the European and national research and innovation programmes such as the EU Commission's 7<sup>th</sup> Framework Programme, Eureka, etc.

The Vision Document presented the research areas required to reach the Vision of the ETP "Food for Life". The key elements need support from an effective input from communication, training and technology transfer.

Within the SSRA the seven key areas are developed into a coherent series of 7 key research challenges. Within each research challenge the main goals are addressed with main research topics to be expected in the short, medium and long-term for industry led innovation programmes.

A draft Implementation Plan was developed and discussed. The modified version will be presented at a Stakeholders' Meeting on 6th June 2008 in Brussels.

Several national platforms have been organised under the umbrella of the ETP "Food for Life".

Campden BRI Hungary Ltd in close cooperation with the Federation of Hungarian Food Industries (FHFI/ÉFOSZ) and CIAA participated in the work of the ETP "Food for Life" from the start including the SMEs Task Force and the coordination of the collaboration of the National Technology Platforms, and has a key role in establishing and operating the Hungarian National Food Technology Platform "Food for Life" as the technical arm of the FHFI/ÉFOSZ on the Board.

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Campden BRI Hungary Ltd, H-1096 Budapest, Haller u.2, Hungary

Tel: +36 1 433 1470 Fax: +36 1 433 1480 [www.campden.hu](http://www.campden.hu)

Campden BRI, Station Road, Chipping Campden, Gloucestershire, GL55 6LD, UK

Tel: +44(0)1386 842000 [info@campden.co.uk](mailto:info@campden.co.uk) [www.campden.co.uk](http://www.campden.co.uk)

# Advisory service for product and technology development for fresh prepared produce

## Selection of raw material quality

- Raw material specifications
- Post harvest handling of fresh fruit and vegetables
- Advice on implementation of raw material assurance programmes (GAP)

## Factory layout and hygiene operations

- Factory planning, production line layout
- Hygienic design of chilled food processing equipment
- Cleaning and disinfection of production lines

## Innovative raw material washing and decontamination techniques

- Improved washing methods, list of the official permitted chemicals
- Non-sulphite dipping methods

## Machinery selection

- Machinery for effective washing of produce
- Machinery for effective produce cooling (traditional and vacuum coolers)
- Selection of cutting, chopping and packing equipment
- Selection of cold store systems

## Packaging technology

- Selection of packaging materials
- Selection of MAP packaging machinery and monitoring system equipment
- Determination of the specific gas mixes
- Selection of the relevant foils

## Packaging trials (normal, vacuum, MAP)

- Optimisation of technology parameters
- Preparation and development of samples (mixes, recipes, different chopping size and methods), product development
- Establishing shelf life (prediction and testing sensory attributes and microbiological safety)
- Gas analysis

## Quality systems

- Assessment of pilot plant trials
- Preparation of product specifications
- Development of process sheets and quality control methods
- Validation of the whole process, challenge test methods
- GHP-s

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