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**TRUEFOOD** 

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**Traditional United Europe Food** 

**Instrument: Integrated Project** 

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### **Table of contents**

1. PROJECT EXECUTION	5
2. DISSEMINATION AND ITS USE	60

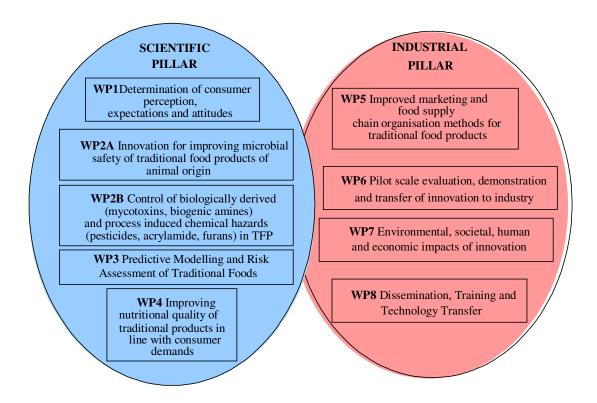
#### 1. PROJECT EXECUTION

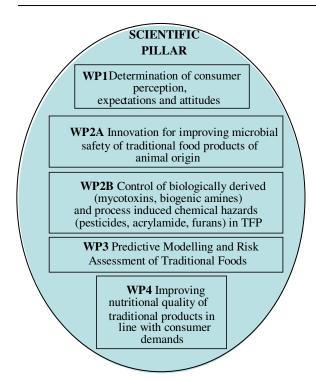
TRUEFOOD aimed to improve quality and safety and introduce innovation into Traditional European Food production systems through research, demonstration, dissemination and training activities. It focuses on increasing value to both consumers and producers and on supporting the development of realistic business plans for all components of the food chain, using a fork to farm approach.

**5 main objectives** were pursued during the 4 year implementation (May 2007 – April 2010):

- (i) To identify and quantify **consumer perceptions**, **expectations and attitudes** with respect to (a) **safety and quality** characteristics of traditional foods and (b) **innovations** that could be introduced into the traditional food industry. (5 % of project effort);
- (ii) To identify, evaluate and transfer into the industry innovations which guarantee food safety, especially with respect to microbiological and chemical hazards (20% of effort);
- (iii) To identify, evaluate and transfer into the industry innovations which improve the nutritional quality, while at the same time maintaining or improving other quality characteristics (e.g. sensory, environmental, ethical) and recognised by traditional food consumers (35% of effort);
- (iv) To support the marketing and supply chain development of traditional food products (10% of effort);
- (v) To facilitate **effective technology transfer** of innovations (those developed within the TRUEFOOD projects and in other EU, national and industry funded R&D projects) into traditional food industry (30% of effort).

The activities were divided into 2 **Pillars**: **Scientific and Industrial**, as shown in the diagram above:





The **Scientific Pillar** of TRUEFOOD had three main strategic objectives:

- to identify and quantify consumer perceptions, expectations, and attitudes with respect to safety and quality characteristics of traditional foods and innovations that could be introduced into the traditional food industry;
- to identify, evaluate, and transfer into the industry innovations that guarantee food safety, especially with respect to microbiological and chemical hazards;
- to identify, evaluate, and transfer into the industry innovations that improve the nutritional quality, while maintaining or improving other quality characteristics (e.g. sensory, environmental, and ethical) and recognised by traditional food consumers.

In order to reach these objectives, this pillar was organized in 5 work packages dealing with consumer sciences (WP1), microbial safety (WP2A), chemical hazards (WP2B), risk assessment (WP3), and nutritional quality of TFPs (WP4). Four to ten partners were involved in each WP. Milk, traditional cheeses (such as Saint Nectaire and Graviera), meat and fish products (such as pork, dry-cured ham, sausage, smoked salmon, fermented fish), plant products (such as tomato, olive, lettuce, cabbage) beverages (such as beer) have been studied either at the production or at the processing stages by 23 partners (five from the private sector) from 14 European countries. Beside the collaboration within each WP, active exchanges have been set up between WPs of the scientific pillar of TRUEFOOD, for instance to determine the acceptability of the innovations by the consumer or to evaluate the safety of the TFPS. Collaboration with the industrial pillar was also effective, especially for the transfer of innovations developed in the scientific pillar.

#### WP1

#### Determination of consumer perception, expectations and attitudes

The overall objective of WP1 was to determine consumer perception, expectations and attitudes towards Traditional Food Products (TFP) and innovation acceptance related to TFPs. This objective has been specified in four sub-objectives:

- (i) Obtaining definitions for the concept of traditional products and innovations related to TFP:
- (ii) Gaining general insight in consumer perception, expectations and attitudes towards traditional food products and consumers attitudes to innovations related to TFP;
- (iii) Understanding the relationship between sensory and hedonic consumer expectations, consumers' attitudes to innovation of TFP and product acceptance;
- (iv) Understanding how attitudes to innovation and contextual factor affect the appropriateness of traditional products.

The approach in WP1 has been to start with a qualitative approach, followed up with a quantitative approach (survey) and finally to gain detailed/specific knowledge by performing experimental studies including presentation of TFP to consumers.

Six partners have participated in WP1: **Nofima Mat\*** (Norway), Ghent University (Belgium), University of Warsaw (Poland), PEGroup (Italy), IRTA (Spain) and INRA (France).

#### METHODOLOGIES & APPROACHES EMPLOYED

### Task 1.1: Definition of 'traditional products' and 'innovation' related to traditional products (months 1-6)

The main objective of task 1.1 was to obtain consumer-driven definitions for the concept of "traditional food products" (TFP) and innovations in TFP and to compare the similarities and differences among countries. In order to accomplish the proposed objectives several qualitative and semi-quantitative studies were carried out in six different European countries: Belgium, France, Italy, Norway, Poland and Spain. In the first step two focus groups were performed in each country, one with rural consumers and the other with urban consumers. From the focus groups 13 key words, including "traditional" and "innovation", were selected for the next step: Word association test. This projective technique allows obtaining supplementary information to the results from the focus groups, mainly based on spontaneous and emotive aspects. To give a conceptual understanding of the relationship between the different key words a grouping test was carried out. Finally, and in order to assess different examples of innovations obtained from the focus groups and examples of innovations from other WPs in TRUEFOOD, a dual sorting test was performed. Interpretation of results from focus groups, word association tests, grouping test and affective test generated a definition of traditional food products, seen from the consumers' point of view.

Task 1.2: Characterisation of consumers' perception, expectations and attitudes towards traditional food products and consumers attitudes to innovation of traditional food production systems (months 4-45)

Subtask 1.2.1 Consumers perception, expectations and attitudes – a survey approach (months 4-18)

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The main objective of subtask 1.2.1 was to quantitatively obtain consumer-driven definitions for the concept of TFP and innovations in TFP and to gain general insight in consumer perception, expectations and attitudes towards TFP and consumers attitudes to innovations related to TFP. This study was a quantitative descriptive study using cross-sectional data obtained through a survey with representative consumer samples in six European countries (Norway, Poland, Belgium, France, Italy and Spain). Data collection was performed in November 2007, through a web based questionnaire, yielding a total sample of 4,828 subjects. Participants were asked to complete a self-administered, structured, electronic questionnaire. The questionnaire consisted of five main sections: (1) behavioural and attitudinal items relating to food purchasing in general, (2) items probing for respondents' definition, attitude and perceptions of traditional foods, (3) respondents' awareness of, and associations with, quality and origin labels, (4) items probing for respondents' definition, and acceptance, of innovations in traditional food products, and (5) personal data relating to lifestyle, general interests and socio-demographics. The selection of items was informed by qualitative exploratory research including focus group discussions and word association tests performed in each participating country (task 1.1). The master questionnaire was developed in English and translated into the national languages using backtranslation to ensure linguistic equivalence. Following this, the questionnaire was extensively pre-tested by the researchers through personal interviews with 15-20 respondents in each country so as to identify and eliminate any potential problems. Fieldwork started after editing, correcting, electronic programming and additional pre-testing of the electronic version of the questionnaire.

## Subtask 1.2.2: Investigation of the relationship between consumer expectations, consumers' attitudes to innovation and product acceptance – experimental studies with physical products (months 19-45)

The main objective was to understand the relationship between sensory and hedonic consumer expectations, consumers' attitudes to innovation of TFP and product acceptance. In this subtask, six experiments were conducted in France (three studies), in Norway, Poland and Spain. These studies were built on some common principles, but there were also country specific elements related to the design, product, and innovations. Two of these studies were conducted on the same product (dry cured ham) in two different countries (Spain and France). Moreover, for three studies, participants were recruited in different cities and different regions. The first objective of this subtask was to determine how new methods of production and/or transformation affect consumer liking of the traditional products in different conditions of information, i.e. blind condition, with extrinsic information only and with full information about the product, including tasting. Consequently, hedonic measurements were conducted in each experiment for these three conditions of information. The second objective was to determine consumers' willingness to pay for traditional products and innovative variants of these products. For these measurements, the same non-hypothetical elicitation method was used: the BDM mechanism. This method was chosen, as it is easier to explain to participants than Vickrey's second price auction. These measurements were conducted, in all experiments in the full information condition, but also in the expected condition (i.e. when participants have only extrinsic information) for five experiments and in the three information conditions for one experiment. Two of the experiments had also a methodological objective that was to compare two non-hypothetical approaches to determine willingness to pay: a direct method (the BDM mechanism) and an indirect method (the real choice procedure). Both experiments were conducted in France (Dijon) by INRA, one on cooked ham and one on cheese.

Concerning innovations, we mainly focused on 'healthy innovations'. Three experiments were carried out on low salt (NaCl) products obtained by a simple reduction of NaCl content (cooked and dry cured ham, sausage) or by using a new salt and by applying a new salting process (smoked salmon). Two experiments were carried out on high omega-3 products (cooked ham where the increase in omega-3 was combined with a decrease in salt, and cheese). The other

innovations concerned environment and safety (High Hydrostatic Pressure), and sensory properties.

# Subtask 1.2.3: Investigation of the relationship between appropriateness, consumers' attitudes to innovation and product acceptance – experimental studies with physical products (months 19-45)

The objectives of this subtask were to understand how attitudes to innovation and contextual factor affect the appropriateness (and acceptance) of traditional products. For traditional cheeses studies have been done in France, Italy, Norway and Spain. These studies may be seen as two cross-cultural studies: One in France and Norway, and one in Spain and Italy. Each country has selected one typical and/or traditional cheese for consumer testing and the methodology used was conjoint. In France and Norway, consumers' responses the following innovations (factors) have been tested: raw milk/pasteurized milk, traditional packaging/new packaging (exclusive and convenience), not organic milk/organic milk, original level of omega-3/increased level of omega-3/increased level of omega-3 and traditional packaging/modified atmosphere packaging. In addition, effects of an increased price (20 % extra) were studied in all four countries and appropriateness for daily consumption vs. a special occasion of the innovations were studied in France, Norway and Spain. The main response was "willingness to buy" the actual cheese. Sensory analysis of the cheeses was not included, even though some of the innovations may to a minor degree affect specific sensory attributes.

For dry cured ham we did one separate study in each of the four countries. These studies were built on some common principles, but were also country specific approaches related to design, innovations and the experimental protocols. Consumers' responses to reduction of salt content were studied in all four countries. In addition, the following innovations were selected: a specific pork genotype (France), effect of brand/origin (Italy), effect of country of origin (Norway) and effect of a new processing method i.e. high hydrostatic pressure (HHP) in Spain. The main responses in all countries were hedonic liking in blind condition, hedonic expected liking in informed condition and hedonic liking in informed condition including tasting of the products.

#### ACHIEVEMENTS OF THE WP TO THE STATE-OF-THE-ART

At the start-point of TRUEFOOD, no consumer driven definition of TFP could be found in the literature. Moreover, few published studies related to consumers' perception of and experiences with TFP existed, and even less studies on consumer perception of and attitudes towards innovations in the food production systems for this product category.

One important achievement of TRUEFOOD to the state-of-the art has been the following definition of TFP:

"A traditional food product is a product frequently consumed or associated to specific celebrations and/or seasons, transmitted from one generation to another, made in a specific way according to the gastronomic heritage, naturally processed, and distinguished and known because of its sensory properties and associated to a certain local area, region or country".

Cross-European homogeneity was found in the elements included in the definition, but across-and within-country heterogeneity exists regarding the specific emphasis of particular elements. As such, four consumer segments were distinguished by whom TFP are predominantly defined as: Multi-concept (with very broad conceptualization of TFP), Usual/Familiar, Authentic/Typical, and Inherited. The overall definition reflects an overview of different elements that traditional food may mean to a European consumer. Dependent on the individual,

the importance of the different elements can vary. Moreover, as the definition is based on consumer perception and is subjective, the meaning of TFP can fluctuate over time within an individual and, as a consequence, can be influenced in a certain direction by for instance communication, marketing, media and/or peer opinions.

Further analyses confirmed that Traditional food is found to have a unanimously positive general image in Europe. The main patterns of product attribute perception are coherent across the six countries. The results show that European consumers' trade-off the relative expensiveness and time-consuming preparation of traditional food for the specific taste, quality, appearance, nutritional value, healthiness and safety they find in TFP. Traditional food consumers across Europe were profiled as typically middle-aged to elderly, health-conscious, ethnocentric, food connoisseurs, who are attached to familiarity in their food choices and who very much enjoy cooking.

Innovations in TFP impacting positively on the intrinsic product quality (e.g. improving healthiness and safety) were found to be well accepted by consumers, whereas innovations pertaining to new distribution systems and formats (e.g. vending machines, home delivery) or ready-meals were less accepted and affected the traditional image of the product. Also new combinations of ingredients and diversifications into different shapes and textures were perceived as damaging the traditional character, but such sensory innovations did not necessarily yield lower product acceptance rates.

Further studies on consumers' responses (acceptance and willingness to buy/pay) to innovations in traditional cheeses, dry cured ham, smoked salmon and sausages did show a large diversity in results. Generally speaking it has been found that consumers' acceptance of innovations in TFP is strongly dependent on type of product and type of innovation. Innovations that provide consumers with relevant benefits without producing substantial changes in the products sensory quality are generally well accepted. Thus, innovations may be accepted if they do induce positive consumer expectations and if they do not induce negative sensory characteristics. For healthy innovations, it seems that a general communication about "quality and nutrition" will be more effective than a communication about "new ingredients". Further, different consumers segments were revealed, some of these responded generally more positively to the presented innovations. Thus, in addition to dependence on type of product and type of innovation, the acceptance of innovations in TFPs is also dependent on selected consumer sample.

#### IMPACT OF THE WP ON ITS INDUSTRY OR RESEARCH SECTOR

The research founded knowledge built in WP1 is important for the Traditional Food Industry. The elements in the definition are important for communications and marketing of Traditional Food Products (TFP). Knowledge of consumers' expectations and attitudes is critical for maintaining the good image of TFP in existing user-segments and for extending and building up new market-segments. Information of consumers' acceptance of innovations in TFP, in general and for specific products/innovations, is important for the industry to ensure a continuously improvement regarding quality and safety in the Traditional European Food productions systems.

## WP2A Microbial safety of traditional products

The WP2A aimed to improve microbial safety of milk, cheese and meat by introducing innovations both at primary production and processing.

The main objectives of WP2A were:

- (i) to improve microbial safety of milks through reduction of the incidence of mastitis and the use of antibiotics by feeding regimes and another management practices
- (ii) to inhibit pathogenic bacteria (e.g. *L. monocytogenes*, *S. aureus*) in traditional cheeses by management of microbial diversity
- (iii) to improve environmental ripening conditions governing cheeses ripening taking into account process efficiency and cheese quality and safety
- (iv) to develop a bio preservation strategy for inhibiting food pathogens on the surface of pork carcasses.

Six partners have participated in WP2A: **INRA\*** (France), ACTIA (France), ISS (Italy), NAGREF (Greece), TUM (Germany), and UL (Slovenia).

#### METHODOLOGIES & APPROACHES EMPLOYED

## Task 2A.1: Effect of feeding regimes and other management practices on i) incidence and treatment of mastitis, ii) antibiotic resistance, iii) milk microbial and sensory characteristics (months 1-48)

Antibiotic resistance is a global problem and one of the reasons of antibiotic therapy failures. Among the many innovative solutions under examination to fight the microbial infectious diseases (e.g., vaccines, phage lytic enzymes, genomic approaches and probiotics), feeding animals and essential oils are one of the alternative strategies.

Feeding dairy cows with a based diet, supplemented with extruded lineseeds increased body condition score, lactose and polyunsaturated fatty acids percentage in milk, total yield milk and total amount of fat and protein content/milking) but had no effect on mastitis. However, there were no differences, neither in the incidence nor in the level of resistance to the antibiotics in veterinary therapy: oxacillin, tetracycline, trimethoprim / sulfamethoxazole, and vancomycin.

Terpinen-4-ol (T4O) is a major component of Tea Tree oil terpinen-4-ol type. Due to its antimicrobial activity, it may be a profitable tool to mastitis prevention. T4O was effective against many microbial strains, pathogens comprising *S. aureus, S. agalactiae, S. uberis, E. coli*, plus commensal strains. The strains have been isolated from milk and milk derivates, sometimes with single or multiple antibiotic resistances. T4O [2%, v/v] reduced the viable counts of microorganisms. Its inhibitory activity could be increased adding vanillic acid and lactoferrin. T4O compromises the cytoplasmic membrane. No resistant mutants appeared for *S. aureus, S. agalactiae*, and *E. coli* exposed to a 4×MIC of T4O or for microorganisms from bulk milk and teat skin of the same herd treated one year.

Cows treated with aqueous T4O the first day of the drying period developed more often mastitis during the drying off period than those treated with antibiotic or oily T4O formula. Milks from cows treated with T4O (aqueous or oily) had the highest cell count.

In a first experiment with cows in experimental farm, the post dipping treatment of cows with *Melaleuca* and T4O reduced the microbial counts on milk and teats. The diversity within dominant species was low in milk with T4O compared with those from untreated cows or from cows treated with natural *Melaleuca alternifolia* essential oil. In a second experiment, the levels of milk flora and of teat flora were similar for animals, treated or untreated with the post-milking

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T4O formulation. After 12 weeks of treatment, the microbial profiles of milks from teats from cows, treated or untreated with T4O and analysed by Single Strand Conformation Polymorphism (SSCP), were very similar. The sensorial qualities of milk from treated cows were different from those of untreated cows only in the 1st period. The post-milking teat dipping T4O did not modify the sensory characteristics of cheeses. T4O was under the detection limit (0.2  $\mu$ g/L in milk) after cow's treatment with T4O, therefore, no negative side effects are expected neither on milk flora, nor starters for cheese making processes.

In Italian farms after 11 months of animal (cow, goat and sheep) treatment with a post-dipping procedure using T4O twice a day after each milking, there was no significant difference in somatic cell counts in individual quarters or in individual bulk milk. But in contrast, there was a lower frequency of mastitogenic isolates from milk samples of treated quarters in cows, sheep and goats. There was no significant difference in the *Lactobacillus* spp and *Lactococcus* counts on skin swabs from treated and untreated udders.

### Task 2A.2: Management of the microbial diversity to prevent pathogens persistence and proliferation (*L. monocytogenes*, *S. aureus*) in traditional cheeses (months 1-36)

Traditional cheeses, especially those produced from raw milk, can be a source of food-borne pathogens, such as *L. monocytogenes* and *S. aureus* that must be controlled. For this purpose, the three main objectives of subtask 2.A.2 were: i) to constitute a collection of microbial consortia or strain composites exhibiting antagonistic activities against *L. monocytogenes* and *S. aureus*, ii) to describe the composition and the population dynamics of microbial consortia by using traditional and novel microbiological methods, iii) to understand microbial interactions between *L. monocytogenes* or *S. aureus* and other microbial populations.

<u>The first objective</u> was reached, as several strains and / or consortia originating from smear-ripened cheeses (Maroilles, Munster, and Andechser Romadur), PDO Livarot cheeses or Saint-Nectaire and Graviera cheeses have been obtained, showing antilisterial or antistaphylococcal activities.

For screening antilisterial or antistaphylococcal activities the advantages and disadvantages of following methods: i) spot tests on agar medium, ii) measurements of the anti-listerial potential of supernatants from short-time liquid cultures, iii) growth in model cheese co-inoculated with the microflora and test strains were evaluated.

The antagonistic effects of strains or consortia against *L. monocytogenes* and *S. aureus* were investigated in several types of cheeses (Graviera, Tolminc) and model cheeses.

Several enterocin-producing *E.faecium* antilisterial strains were frequently isolated from Graviera cheeses made from thermized milk with commercial or yogurt-like starter cultures, whereas two wild (non-starter) nisin-producing *Lactococcus lactis* strains were isolated from raw bulk milk. After addition of two selected strains, *E. faecium* KE82 and *L. lactis* M104, to thermized milk the natural antilisterial activity of raw milk was restored. The above strains were thus applied as bio-protective adjuncts in combination with a commercial starter culture in challenge Graviera ripening trials against both pathogens.

Ten complex microbial consortia, amongst the 34 tested from the surfaces of raw milk St Nectaire cheeses, were particularly effective in reducing the growth of *L. monocytogenes* on cheese surfaces in comparison to a commercial ripening culture. These results argue that some microbial consortia from the surface of raw milk cheeses can protect the cheeses against *L. monocytogenes*. One of these consortia was still inhibitory for *L. monocytogenes* after storage of 31 months at -20°C. Similarly, several antilisteria consortia were isolated from Livarot cheeses. One of them was successfully propagated at the surface of model cheeses.

One consortium from a Tolminc cheese and active against *S. aureus*, was successfully simplified. Indeed, the mixture of two *E. faecium* strains possessing genes for enterocins A and P and one *Lb. plantarum* strain were effective against staphylococci in Slovene Tolminc cheeses. One strain of *L. garvieae* had antagonistic activities against *S. aureus* in milk and in cheeses at the beginning of ripening. However, *L. garvieae* also negatively affects the growth of other

microbial groups (*Enterococci*, *Leuconostocs*, Gram-negative bacteria, yeasts) during cheese-making and ripening.

The second objective, description of a microbial consortium, was also reached. The choice for a method (phenotypic tests, molecular analysis and physical methods) depends on the objective and the kind of microbial community targeted (simple and known composition, e.g. with only lactic acid bacteria, or complex and unknown), the equipment of the laboratory and the budget. Whatever the objective is, DNA sequencing is valuable for being a rapid and relatively cheap identification method and can be used either to describe microbial diversity or to monitor dynamics using isolates grown on different media. FTIR (Fourier Transform Infra Red) is a good alternative but it needs a reference database. It can also be interesting to monitor compositional dynamics by SSCP analysis in cheeses with a well-known microbial community, or to perform quantitative PCR using species-specific primers.

The above-mentioned methods allowed to identify microbial populations of natural consortia showing antilisterial properties and to understand the nature of this inhibition. A natural consortium with antilisterial properties from the rind of a raw milk Saint-Nectaire cheese was composed of a great variety of bacterial species, as more than 23 species could be identified. They belong to the groups of lactic acid bacteria (*Lactobacillus, Leuconostoc, Enterocccus*) and non lactic acid bacteria (*Staphylococcus, Arthrobacter, Brevibacterium, Brachybactrerium sp.*) commonly found in cheeses. But some Gram-negative bacteria and some species infrequent in cheeses were also found: *Carnobacterium mobile, Carnobacterium maltaromaticus, Marinilactobacillus pschycrofermentans, Brochothrix thermosphacta, Vagococcus* spec., and *Leucobacter* spec. Defined consortia consisting of combinations of several of these isolates displayed a weaker antagonistic activity against *Listeria* than the naturally complex consortium. The microbial composition of the defined consortia on cheeses during ripening was less diverse in terms of number of species than the complex one. The simplified consortium containing *Carnobacterium, Marinilactobacillus*, and *Brochothrix* have some interesting antlisteria activities at the surface of the cheeses.

A simplified consortium defined from natural raw milk community and composed of a limited number of *Lactobacillus*, *Leuconostoc* and Gram+ catalase+ bacteria was active in the core and, to a lesser extent, at the surface of model Saint-Nectaire cheeses. It has been tested for its ability to inhibit *L. monocytogenes* at the surface of a farm Saint-Nectaire cheese and of pasteurised Pont L'Evêque cheeses (demonstration in WP6 of TRUEFOOD).

Consortia from the surface of Livarot cheeses were also complex and composed of at least 10 bacterial groups. Using FTIR analyses, it was shown that the composition of one Livarot consortium changed considerably upon propagation in model cheeses, *Yarrowia lipolytica* became the dominant yeast species, whereas the bacterial population was dominated by *Vagococcus* species.

An FTIR-based polyphasic approach combining biochemical and molecular (RFLP, SSCP) identification methods was successfully applied to study the microbial flora composition in core of Graviera cheeses, including LAB species with antagonistic activities.

Concerning the third objective, information was provided about the understanding of microbial interactions by ecological and molecular approaches. Several mechanisms can be involved in the inhibition of *L. monocytogenes* in complex cheese communities. The growth of *Listeria* and *S. aureus* was prevented in the core and at the surface of Graviera cheese, regardless of use of antilisterial strains. This inhibition was due to a strong hurdle effect including decreasing pH and moisture, and increasing salt and organic acids content. In the core or at the surface of noncooked pressed cheeses, microbial communities can inhibit *L. monocytogenes* by producing lactate and acetate. At the end of ripening, this inhibition can be suppressed at the surface of cheeses, due to the consumption of lactate by yeasts and other microbial flora. Further potential inhibitory properties of microbial strains or consortia can be evaluated by using a newly developed PCR method that detects genes coding for bacteriocins.

The main factors identified for the inhibition of S. aureus in some cheeses was the pH. It seems that also Lactococcus strains may inhibit S. aureus by producing  $H_2O_2$ , since inhibition was abolished after addition of catalase. Lactoperoxydase activity of milk and antioxidative activities of microbial communities may play a role in the inhibition via  $H_2O_2$ .

To gain insight in modes of *Listeria* inhibition, microarrays was applied. Surprisingly, a high number of virulence genes L. monocytogenes were found to be induced after acid stress. It seems that acid induces the virulence response, rendering the bacteria more pathogenic. Surprisingly, several heavy metal resistance genes were found to be induced upon acid shock as well. However, very interestingly in response towards an antilisterial consortium, virulence genes are repressed and bacteriocin sensitivity might be increased. Each stressor exhibits a unique stress response. It could therefore be useful to apply more than one bacteriocin from different classes in order to exhaust L. monocytogenes's or S. aureus's adaptation and by this kill the pathogens. Approx 75% of the 25 cheese consortia contain at least one bacteriocin gene and 20% at least three to five. In situ transcription of a bacteriocin (lactococcin G) has been demonstrated by rtPCR for the first time. Strains of Enterococcus species have been shown to bear genes for bacteriocins. The direct production of bacteriocins in situ in hard cheese (Tolminc) has not been demonstrated, however, the results suggest a combined action of bacteriocins and organic acids or other metabolites against S. aureus when a starter composed of three strains, previously isolated from Tolminc cheese (2 E. faecium, 1 Lb. plantarum), was applied. Similar results were obtained with Graviera which contained natural cocktails of bacteriocin genes, mainly enterocins A, B and P, plantaricin A and lactococcin G, detected in cheeses and their LAB consortia by PCR. These bacteriocins potentially contribute to inhibition; however, expression in situ in Graviera cheese has yet to be shown.

In conclusion, testing naturally occurring cheese consortia for their anti-listerial or anti-staphylococcal properties should be considered. Important properties are i) diversity of a given consortium ii) stability of the anti-pathogenic effect over time, iii) number of different bacteriocin genes found, and iv) number of factors which cause inhibition of pathogens (e.g., acid,  $H_2O_2$ ). Inhibiting consortia are then used for cheese production and non inhibitory consortia might eventually be omitted.

### Task 2A.3: Improvement of environmental conditions governing cheese ripening and cheese safety (months 1-36)

The main objectives of this task were (i) to supply advanced instrumentation and control of cheese ripening rooms, (ii) to study how these devices allowed to manage the microbiological, physico-chemical and sensory evolution while cheese ripening, (iii) to investigate the effect of the new monitoring procedures on the dynamics of microbial population and on the anti-listerial activity of selected starter cultures.

In the first step of the research, three "ripening room control prototypes" were designed and installed. Two were located in Aurillac (INRA - URF) and used to control the ripening of PDO Saint-Nectaire cheeses, the third located in Ioannina (DRI – Nagref) was used to control the ripening of Graviera cheeses. These prototypes included: (i) sensors and measurement devices (temperature, relative humidity, oxygen and carbon dioxide concentrations, air velocity, cheese mass weight), (ii) control devices (valves, motors, etc.), and (iii) an advanced software (called CRIC) in charge of data acquisition, on-line kinetic calculations and ripening process control.

In parallel, airflow patterns inside the three ripening rooms under study were experimentally and numerically investigated. Further, numerical calculations were performed to improve the ventilation level and/or homogeneity inside the rooms, where the previous investigation had pointed out a lack of ventilation. Different monitoring procedures were then simulated to monitor internal gas circulation in order to improve the efficiency of cheese ripening. These studies led to the identification of several possibilities (mainly the introduction of sequential ventilation) that could improve the efficiency of the ripening process in terms of lesser cheese weight loss and lesser energy consumption.

In a second step, the trials allowed characterising the cheese ripening used in commercial ripening conditions (reference trials). Saint-Nectaire cheeses presented a significant respiratory activity) whereas Graviera was a "non respiratoring" cheese.

As compared to the reference trials, the results of monitored ripening trials allowed following conclusions:

- 1 Important limitations of air circulation times are possible without significant changes on Saint Nectaire and Graviera ripening characteristics and kinetics, especially microbial growth, substrates consumption, proteolysis level, cheese appearance and sensory evaluation.
- 2 Reduced times of air ventilation (60 and 66% of full ripening time) have been tested successfully in Saint-Nectaire and Graviera ripening. This allows a mean economy increase of about 14% in total energy expenses. Consequently, a demonstration was launched in WP6 in order to validate this result at industrial scale. Moreover, for Graviera significant reduction of cheese mass loss was obtained with sequential ventilation without negative effect on its quality.
- 3 The control of the concentration of  $CO_2$  in Saint-Nectaire ripening rooms is easy to perform by introduction of air or  $CO_2$ . A high  $CO_2$  concentration (set point = 3%) favoured the growth of mycelium and increased the Saint-Nectaire ripening rate without negative effect on its quality. A demonstration was launched in WP6 for designing of a lab size respiratory ripening cell allowing an accurate study of cheese ripening before and after wrapping.

Finally, the study focused on how the ripening conditions and the new monitoring methods and algorithms have impact on the inhibition of *Listeria*.

The inoculation of microbial consortium AB selected in task 2A.2 can control the growth of *L. monocytogenes* during ripening of Saint-Nectaire cheeses. Whatever the temperature and relative humidity at 18 day of ripening, it reduced about 2 Log of the *Listeria* population in the core of cheese as compared to the reference, at 28 day, it was was about 4 Logs (level below detection limit). The inhibition of *Listeria* in the cheese's core by the simplified consortium AB could be due to higher consumption of galactose and production of lactate. At day 8 of ripening, the inhibition by the consortium was better at 13°C than 9°C as the growth of *Lactobacillus* and *Leuconostoc* was favoured, the galactose consumption and the lactate production were increased. But without the consortium, 13°C favoured the growth of *L. monocytogenes* at the surface. A decrease of rh (from 98 to 93%) reduced *L. monocytogenes* growth, especially at the surface of cheeses.

The survival pattern of listerial populations in small-size Graviera cheeses during ripening of two trials under continuous and sequential ventilation (at 17-18°C and 90% RH) was similar.

Finally, a model for the determination of Saint-Nectaire type cheese mass loss versus ripening time as a function of the ripening conditions was established. The model includes three main parameters: (i) microbial growth and the respiratory activity occurring at the surface of cheese, (ii) heat transfer from cheese to ripening room atmosphere, (iii) water evaporation and transfer from cheese to ripening room atmosphere.

Saint-Nectaire ripening trials involving different ripening temperature and relative humidity were performed. Using those trials some of the model parameters were adjusted, and then the difference between the experimental cheese mass loss and calculated mass loss during the whole ripening time were compared.

The model fitting was generally good: the final errors on the cheese mass loss ranged between 0.5 and 15% which corresponded to differences going from 1 to 34g (for a total cheese mass loss varying from 180 to 245g). The incidence on the accuracy of the model of the uncertainty characterising the main variables was quantified. Ripening room relative humidity (rh) and cheese surface water activity  $(a_w)$ , which govern the water transfer rate, had the highest impact. The use of this model brings new concepts to master the ripening process: (i) The "final cheese mass" can be a target for the cheese makers, trying to reach it with a maximum accuracy, (ii) The following up of a "cheese mass loss profile" versus ripening time could be linked to rh control.

#### Task 2A.4: Bio-preservation of pork carcasses/muscle by lactic acid bacteria (months 1-30)

The aim of this task was: i) to select antagonistic lactic acid bacteria (LAB) strains to inhibit pathogenic bacteria (*L. monocytogenes* and *S. aureus*) in order to bio-preserve raw pork meat used in dry fermented sausages manufacturing, and ii) to identify the optimal inoculation conditions of LAB strains.

Among eight LAB strains tested, one *Lactobacillus farciminis*, used as starter (Lallemand SA), and three *Lactobacillus sakei* (DM2, DM3, and IM8), isolated from dry fermented sausages turned out to be potentially interesting against *L. monocytogenes* (serovar 1/2a from ADIV collection) and *S. aureus* CIP65.8.807 growing on raw pork muscles.

The optimal inoculating method for the antagonistic LAB strains was a high inoculum level (around  $6 \log_{10} \text{cfu/g}$ ) inoculated by spraying or 30s soaking.

No antagonistic activity against *S. aureus* of the three LAB strains(IM8, DM2, DM3) used for biopreservation raw pork meat could be observed in dry fermented sausage at pilot scale manufacturing. However, the LAB strains IM8, DM2 and DM3, reduced around  $1-\log_{10}$  cfu/g *L. monocytogenes* in dry fermented sausages (D60) compared to the control trial. pH, weight loss, and  $a_w$  were the same with or without the LAB strains

The sensorial qualities of sausage inoculated with the *Lb. sakei* DM3 gave a similar or superior taste compared to the control. Products with IM8 showed a change in color, this default can be corrected by optimizing the technological parameters. These two LAB strains were suggested for further experiments as part of the demonstration activities planed in WP6.

#### ACHIEVEMENTS OF THE WP TO THE STATE-OF-THE-ART

#### An alternative to mastitis treatment: the use of essential oil ingredients

Our work contributed to the general research efforts to overcome the problems caused by the use of antibiotics in mastitis prevention and therapy. Preparations containing terpinen-4-ol (T4O, a post-milking teat dipping and a intra-mammary gel for dry off treatment), a component of many essential oils, particularly of Tea Tree oil terpinene-4-ol type has been evaluated by in *vitro* and in *vivo* studies as alternative. This compound proved efficient against of environmental mastitogenic by acting on the cell membrane and without causing emergence of resistance. Formulas containing 2% of T4O *M. alternifolia* essential oil applied as post milking treatment can lightly reduce the milk and teats indigenous microbial flora, but the sensorial qualities of cheeses were not compromised. The effect of mastitis reduction needs now to be confirmed at larger scale.

#### Insights into the microbial ecology of traditional cheeses

A great biodiversity of the microbial communities and their dynamics at the surface of cheeses were revealed by combining phenotypic, physical (FTIR analysis) and molecular methods (DNA sequencing, SSCP). More than 30 microbial species have been found on the surface of Saint Nectaire cheeses. On the surface of this cheese type and other smear cheeses, some species (Vibrio, Marinilactobacillus, Vagococus, and Carnobacterium) were not frequently found in dairy products in the past. A new Vibrio species could be described from cheese consortia (Vibrio casei spec. nov.) It was demonstrated that whole or partial consortia from raw milk or from the surface of cheeses enable a natural bioprotection, thereby contributing another hurdle to the system directed against Listeria in raw milk cheeses. Some consortia were successfully simplified, that means that the number of bacterial strains was artificially decreased. Such simplifications demonstrated the synergy between lactic acid bacteria and Gram+ catalase bacteria in inhibition of L. monocytogenes. Further, some non starter lactic acid bacteria are of importance for the safety of thermized cheese such as Graviera against L. monocytogenes and S. aureus. However the use of concentrated commercially defined starter cultures was proven a prerequisite for well monitoring LAB in cheese. The inhibitory potential of diverse dairy

microbial consortia can be assessed owing to the development of methods to detect the presence of bacteriocin genes in microbial consortia. Consortia with a greater potential of bacteriocin genes can now be tested further in their antilisterial and antistaphylococcal activity.

Prerequisite to inhibit pathogens in dairy products is to understand microbial interactions. Our results confirmed the role of organic acids and  $H_2O_2$  as key factors in the unspecific inhibition of pathogens or parts of the microbial flora. At molecular level, our results provide information about the detection and transcription of bacteriocin genes and how *L. monocytogenes* responded on the transcriptional level to different stresses (acids, heavy metals, bacteriocins, and inhibitory consortia).

### Improvements in ripening room monitoring reduce energy consumption and increase microbial safety

New concepts to master the ripening process were proposed. Sequential air ventilation (during about of 40% of the total ripening time) of cheese ripening rooms allowed saving of electric energy (at least 14%) and increased final cheese weight, without any negative effect on cheese quality. These results were confirmed performing a demonstration at industrial scale (WP6 of TRUEFOOD). The economy of energy reached about of 50 to 60% of the electrical consumption of the industrial ripening room studied. Furthermore, a model to determine cheese mass loss versus ripening time as a function of the ripening conditions for Saint-Nectaire type cheeses was set up. In adjusting ripening conditions (temperature, humidity, atmosphere composition), combined with efficient monitoring, allowed to further employ the synergy of selected microbial consortia and technical changes on the inhibition of *Listeria* and other pathogens.

### The Bio-preservation of the raw pork meat can improve the safety of dry fermented sausages

Three *Lb sakei* have been selected in view of reducing *L. monocytogenes*. It was determined that spraying or soaking (30s) solutions of LAB was the best way to inoculate protective bacteria on the pork muscles used for sausage production .Some selected strains gave superior quality in the final end product compared to formerly used starter cultures; for other strains the production recipes had to be adapted.

#### IMPACT OF THE WP ON ITS INDUSTRY OR RESEARCH SECTOR

On the basis of the results of WP2A, some alternative strategies can be proposed for the future in order to reduce the use of antibiotics in the breeding systems by using derivates of essential oil, such as terpinene-4-oil, for teat treatments. Such alternative treatments may also contribute to reducing antibiotic resistance, which will have a direct positive impact on mastitis therapy and environmental protection, and indirectly on human health.

By improving the safety of traditional cheese and meat products through new biopreservation strategies, the results of WP2A are expected to have a positive economical impact on the dairy and meat industry. To comply with the current E.U. microbiological regulatory criteria farmers and SMEs producing raw milk cheeses are obliged to strictly control pathogens in their cheeses and have to destroy any cheeses contaminated with *Listeria monocytogenes* or containing enterotoxins produced by *S. aureus*. This has a negative economical impact as in some cases this loss can account from 0.1% to 1% of the cheese production. Our results will contribute to reduce this cost and help SMEs to export safe products. This seems particularly effective for traditional Greek Graviera cheese producers; based on the WP2A results, Graviera cheeses should be regarded as a safe RTE food, not supporting *L. monocytogenes* growth, according to the E.U. 1441/2007 regulation. Thus, for this kind of cooked hard cheese, a tolerance below 100 cfu/g of *L. monocytogenes* can be accepted. Also, Graviera cheeses made from thermized milk are safe in regard to *S. aureus*, which is unable to grow, and thus, never exceeds above a 5-log level considered risky for enterotoxin production. For other cheeses, with less strong hurdle

technology such as Saint-Nectaire cheese, very promising results have been obtained to reduce the level of *L. monocytogenes* by using more or less complex microbial consortia. Moreover, our results provide arguments for raw milk cheese production as their microbial diversity and antipathogenic behaviour can be an assessed.

In the same way the safety of pork meat products can be improved by a biopreservation approach based on the use of *Lactobacillus sakei* strains.

The increase of cheese ripening process efficiency by reducing the air ventilation time, around of 50-60% of total ripening time will lead to significant energy economies, and thus reduce the production costs and increase the cheese making productivity.

The results of WP2A will benefit to the research sector through several international publications increasing our knowledge about microbial diversity of cheeses, their antipathogenic properties, the role of antimicrobial compounds such as organic acids, peroxide, bacteriocins, and the importance of microbial interactions.

#### WP 2B

#### Control of biologically derived and process induced chemical hazards in TFPs

The main objectives of WP2B were:

- (i) to develop sensitive diagnostic antibodies for "in-house/user friendly" mycotoxins detection of traditional food products based on grains (i.e. beer as first model);
- (ii) to set up and validate analytical methods (LC/MS-based) for broad range/high sensitivity screen of mycotoxin;
- (iii) to define a HACCP for traditional beer production system (beer as first models). The activities performed to reach these objectives were divided in five tasks.

Seven partners have participated in WP2A: **ENEA**\* (Italy), ACTIA (France), ESB (Portugal), ICT (Czech Republic), KTU (Turkey), UL (Slovenia), and UNIPG (Italy).

#### METHODOLOGIES & APPROACHES EMPLOYED

Development of diagnostic tools has to take into account several variables which range from sensitivity and reliability to cost and easy of use for SMEs. Actually, there is not a single method that can meet all the requirement of an ideal diagnostic tool. Therefore, several methods need to be developed which, through mutual comparison, may provide the required needs. For this reason in all the tasks of the WP several methods have been developed. In particular in tasks 1 and 2 chromatographic methods, which have high sensitivity and reliability, have been associated with immunological methods that are much less expensive but need a validation from other analytical techniques.

### Task 2B.1: Identification and evaluation of analytical protocols for mycotoxins suitable for SME size traditional brewing companies (months 1-42)

Engineered antibody fragments (particularly in the single-chain Fv format, scFv) from 'phage-display' libraries are possible alternative tools for mycotoxins analysis. A selection of some scFv antibodies against T-2, Deoxynivalenol (DON) and Ochratoxin A (OTA) mycotoxins has been attempted from phage display libraries.

Two approaches have been followed to make the selection:

- 1. A synthetic phage display library ('F8 library') search;
- 2. An antibody phage display libraries from mice immunized with the different mycotoxins as Bovin Serum Albumin conjugates (-BSA) was built and screened with relevant mycotoxins conjugated with Ovalbumin (-OVA).

The 'F8 library' was utilized to perform a selection according to three different protocols. Some clones against T-2 were repeatedly isolated. They were produced as soluble proteins, purified and characterized for specific binding. Two of them showed the ability to bind the free mycotoxin. From the immunized animals three different repertoires were obtained. The diversity of each library was about  $10^6$ - $10^7$  transformants (80-100% of clones contained scFv genes). However, after a single biopanning procedure performed on the relevant OVA-conjugated mycotoxins, no scFv was isolated. This might be probably due to the low 'visibility' (lower coupling ratio mycotoxin/protein) of the mycotoxin used for selection compared to that used as immunogen.

Highly sensitive HPLC-MS/MS method for seven Fusarium mycotoxins has been developed and optimised in barley, malt and beers. The LC-MS/MS method for deoxynivalenol and zearalenon was subjected to the regular Food Analysis Performance Assessment Scheme (FAPAS®) inter-

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<sup>\*</sup> WP leader

laboratory proficiency tests as a part of the external quality assessment. Satisfactory results meeting quality requirements are documented in FAPAS $^{\text{@}}$  reports issued during 2006 – 2009.

The HPLC-MS/MS method used for determination of trichothecene mycotoxins in barley and malt was extended to enable analysis of conjugated form of deoxynivalenol (DON) - deoxynivalenol-3-glucoside (D3G). In addition, alternative UPLC-TOF MS and AccuTOF-DART MS techniques for detection of major Fusarium toxins in beer were implemented.

One extensive survey was devoted to mutual comparison of LC-MS and ELISA methods, which represent two key analytical approaches for mycotoxin determination worldwide. It was proved, that DON-3-Glc contributes significantly to DON overestimation in tested samples, when DON-dedicated ELISA kits are used for analysis.

The levels of mycotoxins in several samples of barley, malt and beer samples were evaluated by the developed analytical methods.

Deoxynivalenol (DON) was found in 93 % of examined barley samples from harvest 2006, nevertheless levels did not exceed the limit set by EC legislation. The increase of DON content occurred during the malting in most of samples, probably due to its release from bound forms.

The contamination of malting barley samples as well as malts seems to be highly dependent on their country of origin. Significant levels of mycotoxin DON and its conjugated form DON-3-glucoside were detected in Czech beer samples whereas contamination levels of Italian samples were approximately two times lower. All brewing intermediates of Red and Dark beers provided by Italian partners were positive for DON and DON-3-Glc, the mean contamination of final beer was about 15µg/L of each analyte.

## Task 2B.2: Control of i) biogenic amines, nitrosamines, in all the whole production chain of beer production and traditional fish products, ii) acrylamide and furans in beer production (months 1-46)

Innovative analytical methods to monitor nitrosamines (NA) and biogenic amines (BA) in brewing production chain were developed. In particular, a high-performance liquid chromatography method for the simultaneous determination of biogenic amines after pre-column dansylation of amino groups and subsequent liquid-extraction of the derivatives using ethyl acetate was setup. The method involves addition of an internal standard (1,7- diaminoheptane). Such a method is reliable for determining ten biogenic amines in different sample matrices: malts, worts and beers.

A sensitive procedure for determining 5 N-nitrosamines (N-nitrosodimethylamine (NDMA), N-nitrosodiethylamine (NDEA), N-nitrosodipropylamine (NDPA), N-nitrosodibuthylamine (NDBA) and Nitrosopyrrolidine(NPYR)) was also produced. A second method, for detecting five N-nitrosamines in malt and beer, employing gas chromatography coupled with thermoionic specific detector, has been set up and validated.

The relationship between raw material composition and levels of contaminants (biogenic amines and nitrosamines) in malt and final beer was investigated during the brewing process at pilot scale. Three different malts (Pilsner, Munich and Coloured) were used for three different technological trials. Performing a decoction mashing pils, amber and dark beer were brewed. Samples analysed during the process were: malts, water, hops, brew mash, brew final mash, brew spent grains, brew wort, brew boiled wort, brew cold wort, brew green beer, brew matured beer, brew filtered beer.

The data obtained contributed to evaluate the type of BA and the range of concentration in raw materials, during brewing and in the final beers. Putrescine (PUT), spermidine (SPD), spermine (SPM) and agmatine (AGM) are amines naturally present in barley and their concentration increase in malt. No amines are in production water. PUT, AGM and histamine (HIS) are present in malt and hop. Taking into account the low levels of hops in beer, it can be said that malt is the main source of BA in beer. Low levels of BA are determined in commercial samples.

The presence of NDMA in beer is known from the literature but data confirm that other NA are present especially in experimentally produced malts and beers. Roasted malt shows higher levels

of NA than Munich and Pilsner malt. Anyway, the study of the brewing process permits to conclude that even using dark malts to make red or dark lager beers the final amounts of NA in beer are very low.

Analytical method based on the solid phase microextraction (SPME) head-space sampling of target analyte followed by high resolution GC-TOF MS determination (ion m/z = 68.026) was implemented for the detection of furan in all the matrices of beer production chain. Limit of quantification is about 0.2  $\mu$ g/L beer, repeatability expressed as the relative standard deviation is 5% at 2  $\mu$ g/L beer. European proficiency test on the determination of furan organized by EC Joint Research Centre (IRMM) in May 2008 proved the quality of generated data. A survey on furan content in various types of Czech/Italian beers also was carried out.

A new analytical method for acrylamide determination in beer samples, based on two steps sample clean up by SPE columns, was developed. Extracts are then analysed using the high performance liquid chromatography coupled to tandem mass spectrometry (LC-MS/MS). Performance characteristics of the implemented method are: limit of detection (LOD) 2  $\mu$ g/L and limit of quantification (LOQ) 5  $\mu$ g/L.

Moreover, Czech and Italian beer samples were collected and analysed for the monitoring oacrylamide levels. The highest levels of acrylamide were found in dark beers. About 30% of examined samples contained acrylamide levels above limit of quantification of the LC-MS/MS method.

A system of control and traceability of biogenic amines and nitrosamines in traditional fish products (TFPs) has been studied by testing commercial immuno-test kits for histamine detection against HPLC methods, and by defining a HACCP system for traditional fish production.

The test of immuno-kit for histamine detection permitted to individuate the most suitable kit for traditional fish products that have generally consistent amount of salt which interfere with detection techniques. For this reason also an improved ion-chromatography/MS/MS detection method has been developed to analyze salty samples.

Concerning the safety management, many TFPs parameters such as pH, water activity, salt content and bacterial counts, storage temperatures have been investigated, In addition, selected TFPs were tested for biogenic amine contents and few other hazards such as pathogens and nitrosamines. Salt applications procedures (amount and the application type) and storage conditions of raw materials before processing are found to be the main factors affecting TFPs safety. According to analytical results a HACCP system for TFPs has been realized. This system is implemented on a website to guide small and medium sized (SMEs) companies producing TFPs.

#### In parallel tasks 2B1 and 2B2

CCPs for mycotoxins, nitrosamines and biogenic amines were identified. Then, a specific good practices guide for the management of mycotoxins risk into malt-houses, microbreweries and medium size industries was elaborated. Finally, a specific good practices guide for the management of nitrosamines and biogenic amines risk into malt-houses, microbreweries and medium size industries was done and at the end of the research the two good practice guides were assembled.

The result is a new guideline based on the application of HACCP system and prerequisite programmers (GMP/GHP/GAP) for assessing, evaluating, and controlling the specific risk coming from mycotoxins, nitrosamines and biogenic amines in malting and brewing industries.

A summary scheme about the CCPs, CPs and control measures along the malt and brewery process were elaborated. Interviews in two Italian SME'S breweries company were done. The aim of the audit was to verify the knowledge of the risk and the management of the mycotoxins, nitrosamines and biogenic amines by the Italian SME's operators. A specific checklist was elaborated and used during the audit. The results obtained demonstrate the utility of the good practices guide elaborated in the project.

### Task 2B.3: Monitoring transfer of organochlorine compounds along the production of traditional meat products (months 1-36)

The food chain is the primary source of human exposure to a large class of environmental organics among which organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs) had potentially harmful neurotoxic and immunological effects. The lypophilic nature of these compounds is the reason for their concentration and bioaccumulation in the food chain. They can be found in foodstuffs of animal origin, mostly in meat and organs that contain fat, in milk and dairy products, eggs and fish. In order to develop reliable risk assessment procedure, information on proliferation of toxic compounds through the production chain to the end product is needed.

The purpose of this work was to combine experimental measurements on the proliferation factors and theoretical knowledge in order to develop reliable prediction tools that are able to estimate proliferation rates also for those compounds for which experimental values are not available. In particular, an analytical method for the detection of organoghlorine compounds in fatty food was developed and used to measure the concentration of OCPs in three meat products. A quantitative structure property relationship (QSPR) model was realized first with literature data and then with real data obtained by the developed analytical method.

#### Task 2B.4: Influence of packaging systems on food safety risks and shelf life(months 1-24)

The problem of packaging of traditional cheeses was afforded by innovative films releasing active antimicrobial compounds. Several films were prepared based on low density polyethylene and regenerate cellulose with suitable coatings able to release several antimicrobial compounds (nisin, natamycin, chitosan). The characteristics of the films were analysed from physical and chemical point of view and their ability in preserving two traditional Czech cheeses and one Portuguese cheese were established.

A consistent amount of analytical data has been produced which characterize the different films. In two cases (Saloio cheese & RCF and  $Blat \Box \acute{a}ck\acute{e}$  zlato cheese & LDPE) the films prepared have been found suitable for improving storage conditions and safety of cheese. There was one case ( $Olomouck\acute{e}$  tvaruz  $\Box ky$  & LDPE) in which the active compound was not effective in the control of pathogen microbiological activity and also had interference with natural cheese bacterial flora.

### Task 2B.5: Safety of alternative packaging systems: assessment of consumer exposure to residues resulting from active packaging (months 1-36)

The problem of chemical safety of food, in active packaging films, was addressed by three different points of view.

The first is related to the migration of substances from the polymers to the food. In this issue both the migration of active compounds, which are responsible of the innovative preservation mechanism of the package, and the migration of other substances that may be possible sources of risk are considered by different analytical approaches. Migration test in liquid food simulants were performed and a preliminary attempt to evaluate migration in raw food was made. The migration of nisin was found negligible in apolar simulants and very fast (few hours) in aqueous simulants. On the other hands, the migration of natamycin was found a little bit slower. Unfortunately, the interference of natural nisin and other compounds makes a direct evaluation in raw food impossible. An indirect determination was then made by measuring the residual active compounds into the film after food contact.

The second aspect considered was related to the changes induced by the food contact in the polymer structure. This aspect was afforded by measuring functional properties of the polymer as a function of food contact time and by using solid state Nuclear Magnetic Resonance (NMR) to evaluate the dynamic properties of polymer network. In this case a plasticizing effect on the polymer was observed probably due to the migration of fatty compounds from the cheese to the polymer. The third point of view was that of chemical stability of food during packaging storage. This aspect was analysed by high resolution NMR metabolic profiling of the food during storage

time. Principal component analysis is used to visualize the changes in the food chemical composition thus evaluating which polymer is more suitable for a determined type of cheese in terms of chemical stability. In addition, an attempt to characterize the food stability by NMR relaxation was made. NMR spin-lattice relaxation time T1 was measured in several cheese-film systems as a function of storage time. Only in few cases, significant variations of T1 were observed.

#### ACHIEVEMENTS OF THE WP TO THE STATE-OF-THE-ART

Significant improvements in the knowledge of chemical contaminants (mycotoxins, biogenic amines, nitrosamines, acrylamide and furan) proliferation along the beer production chain have been achieved. In particular, the different mechanisms and phases of proliferation for each contaminant were determined experimentally. The role of masked mycotoxins in contamination assessment of beer have been exploited. New information and techniques have been obtained on the production of monoclonal antibodies for mycotoxin detection. In particular, the selection of monoclonal antibodies sensitive to two beer mycotoxins was successfully achieved. Useful procedures for risk assessment in beer and traditional fish products have been produced and relative HACCP plans delivered.

New information on the mechanisms of proliferation of organochlorine compounds (OCCs) in meat have been obtained by combining experimental results and theoretical know-how. New knowledge on the relationship between OCCs structural descriptors and their proliferation in meat products has been produced. A model is now available to predict OCCs loss in meat products during processing.

New knowledge on the ability of different active packaging films in preserving dairy products has been produced. The effectiveness of antimicrobial activity of these new films was elucidated in connection with the peculiar characteristics of packaged cheeses and film composition.

Migration mechanisms of packaging active compound toward food have been elucidated making evident the inadequacy of simulants approach in the correct detection of migrants. Innovative analytical tools and protocols have been developed to test the performances and assess the safety of new active packaging films.

#### IMPACT OF THE WP ON ITS INDUSTRY OR RESEARCH SECTOR

SMEs have now new tools to cope with chemical risks in beer and traditional fish production chain. In particular, more sensitive and reliable analytical methods are now available to SMEs for control of production process from row material to final products. In addition, HACCP guideline are now available to manage the safety and quality control of beer and traditional fish producers.

Meet producers and transformers may take advantage of the knowledge produced to implement their own OCCs proliferation model reducing the costs of risk management in the case of meat coming from OCCs contaminated areas.

SMEs have now access to additional knowledge that may help them in the choice of the most suitable packaging material in order to improve safety and increment shelf life of dairy products. In addition, SMEs and regulatory organisms may take advantage of the information on the packaging migration test to improve the safety of their packaging procedures. They may also access to the new analytical tools and protocols to test the safety and the performances of forthcoming new active packaging and to test the reliability of already available films to preserve new food categories.

#### WP 3

#### Predictive modeling and risk assessment of traditional foods

The main objectives of WP 3 were:

- (i) to evaluate and quantify the most important environmental and other factors affecting pathogen behaviour and include them into mathematical models. Such models will be able to describe the effect of static and dynamic environmental conditions, mainly temperature, as well as the ecological complexity of specific traditional food products.
- (ii) to fully exploit the predictive models validated and developed and to transform them into practical management tools. This will be based on using and adapting existing (ComBase, Sym'Previus, Pathogen Modelling Programme) software systems and/or develop new user-friendly software packages.

The activities performed to reach these objectives were divided in four tasks.

Four partners have participated in WP3: **AUA**\* (Greece), ACTIA (France), CCH (Hungary), and ESB (Portugal).

#### **METHODOLOGIES & APPROACHES EMPLOYED**

#### Task 3.1: Evaluation of safety level of selected traditional products (months 1-46)

A retail survey was carried out in five hundred and forty eight (548) traditional European food products to determine the presence of foodborne pathogens and other spoilage microbiota. The examined products were classified into three main categories, namely fermented meats, dairy products, and plant products. The main focus was given on major pathogens, such as Escherichia coli O157:H7, Listeria monocytogenes and Salmonella sp. However, depending on the specific characteristics of the food commodity under investigation, further pathogens were taken into account, such as Bacillus cereus and Staphylococcus aureus. In order to have a better overview of the microbiological condition of the products, total viable counts were determined and microorganisms (coliforms, enterobacteria) were enumerated. microbiological data, the survey included information about the main physicochemical attributes such as pH, water activity (a<sub>w</sub>), NaCl content, nitrite concentration, and % moisture content. Finally, the suggested shelf-life and storage conditions provided by the manufacturer were reported.

In addition, different food chains have been mapped for the efficiency of the management of the food safety and steps were identified that either introduce a hazard or increase the food safety risks, thereby requiring better control in order to sustain compliance with established food safety and hygiene requirements. The supply chains mapped in Greece included fermented green olives, ready-to-eat fishery products, set and stirred yoghurts, cooked sausages and cooked cured meat products. Similar work was undertaken in Hungary for the supply chain of air-dried, smoked sausage and composite products made of the use of these sausages as ingredients. In addition, the critical control points (CCPs) as well as the good hygiene practices (GHP) of traditional bottled soda water, honey, dry pasta, and fruit jams have been determined and mapped. Temperature profiles were recorded in retail outlets (supermarket refrigerators) for a variety of food commodities, as well as on the time-temperature fluctuation profiles of transportation trucks. Additional temperature profiles in household refrigerators were monitored and consumer practices and perceptions were documented for the traditional Hungarian sausage supply chain with measurements in home larders in which consumers store sausages. Moreover, the effect of different settings (level of loading, arrangement of foodstuffs in the cabinets and

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<sup>\*</sup> WP leader

temperature adjustment) on temperature distribution of different retail cabinets used in retail shops was investigated.

### Task 3.2: Effect of microbial interactions and food matrix on the growth kinetics of pathogens (months 1-46)

Data have been collected on the growth responses of *L. monocytogenes* under different food matrix conditions based on experiments carried out in well defined laboratory media (broth, agar-spread and pour plate technique) as well as on real foods (naturally contaminated minced meat, naturally contaminated meat blocks and sterile meat blocks) at different storage temperatures. The obtained data were used to develop and validate a general mathematical package, based on expert systems approach (artificial neural networks) to describe the effect of food structure and composition on microbial growth.

Moreover, several gel models have been developed that could mimic food matrix in order to simulate the effect of food texture on bacterial growth using existing software (Sym'Previus). Attention was given on the effect of food structure/matrix on the growth of *L. monocytogenes* in order to determine and identify parameters which could count for the impact of texture on microbial growth and thus enable microbial predictive simulation in food. Gelatin, casein and carrageenan based gels have been artificially inoculated by *L. monocytogenes*, whose cardinal values are well characterised and available in Sym'Previus. Texture characterisation and viscoelasticity measurements of tested food matrices, environmental conditions (concentration of the texture agents, water activity and temperature) and microbial parameters (microbial load, growth rate and maximum population) have been used to determine the pathogen's kinetic parameters. Based on the minimum inhibitory concentration concept, a mathematical approach has been proposed to simulate *L. monocytogenes* growth in food.

#### Task 3.3: Predictive modelling and microbial risk assessment (months 1-46)

Challenge tests have been undertaken for the validation of existing user-friendly on-line predictive modelling softwares (e.g. Growth Predictor, Sym'Previus). Traditional Hungarian meat products (sausages and salamis) were inoculated with selected pathogens (*L. monocytogenes* and *S. aureus*) and stored under isothermal and non-isothermal conditions using different fluctuating temperature scenarios simulating the chill chain. Moreover, a product-specific model has been developed to predict the growth profile of *L. monocytogenes* in pasteurized vanilla cream stored fluctuating (periodically changing) temperature scenarios. The performance of the developed model was further compared against Growth Predictor and Sym'Previus softwares.

In the area of risk assessment of traditional European foods, a risk profiling sheet based on a simple decision support tool was applied as a model for traditional Hungarian meat products (dried fermented sausages and flamed sausages) in order to organise the collected information in a structured way to help decisions on control and monitoring activities, and set up priorities for the products in terms of the level of comparative risks. The developed risk assessment approach was based on a simple questionnaire that helped to structure the available fragmented data and highlighted gaps to identify where additional tests/information (e.g. challenge tests, etc.) were necessary. This simple risk assessment approach was further applied to other traditional European products including a traditional Greek sausage (Piroski) and a cooked cured pork meat - ham type – product to define the risk of *L. monocytogenes*. Additional semi-quantitative risk assessment was undertaken for *Salmonella* spp., pathogenic *E. coli*, and *L. monocytogenes* using Risk Ranger, a user-friendly excel add-in, that embodies established principles of food safety risk assessment, i.e., the combination of probability of exposure to a food-borne hazard, the magnitude of hazard in a food when present, and the probability and severity of outcomes that might arise from the level and frequency of exposure.

### Task 3.4: Improvement of already existing user-friendly software for the prediction of safety of traditional food products (months 1-46)

The performance of the existing predictive modelling softwares (e.g. Combase, Sym'Previus) was evaluated in order to predict the responses (growth/survival) of pathogenic microorganisms in foods. Specifically, Combase (www.combase.cc) was employed to simulate the growth profile of *Bacillus cereus* in vanilla cream during storage at isothermal conditions (5, 10, 15, and 20°C) and compare the result with experimentally obtained data. Simulation was also compared with the output produced by the primary model of Baranyi and Roberts that was developed on the same experimental data set. Moreover, the growth responses of L. monocytogenes in the same product during storage at fluctuating (dynamic) temperature profiles have been quantified and compared with the predictions produced by Combase and Sym'Previus (www.symprevius.net). Combase Predictor polynomial simulation tool provided satisfactory simulation results but required numerous polynomial parameters to be determined for specific environmental conditions. In contrast, Sym'Previus cardinal modular simulation tool enabled the development of several modules taking into account the influence of different factors with biological significant parameters, i.e. temperature, pH, water activity, organic acids, and possibly the impact of food texture. In addition, an exhaustive literature search has been undertaken to calculate a global growth rate of L. monocytogenes in food. Depending on food structure or the application of a particular food process (grinding, brine, temperature, cooking), several food product categories have been defined.

#### ACHIEVEMENTS OF THE WP TO THE STATE-OF-THE-ART

In the last decade a significant number of mathematical models for the growth of various pathogenic and spoilage bacteria have been published. Despite this progress however, safety and spoilage models remain a research tool rather than an effective industrial application for decision making. The reasons for this can be summarised as follows:

- the developed models are based on experimental observations in a well-controlled and defined laboratory environment using microbiological media. Predictions based on such models are not necessarily valid in complex food ecosystems since significant factors for microbial growth such as the food matrix and the interactions between microorganisms are not taken into account. As a result, validation of these models to real food products often shows low accuracy, which limits industry confidence;
- the majority of models have been focused on the effect of environmental factors (e.g. pH, aw, T) on the maximum growth rate without taking into account the duration of the lag phase. Ignoring lag phase may lead to underestimated shelf life predictions with significant economic losses for the food industry;
- most models have been developed and validated under static temperature conditions. In practice however, temperature fluctuations are often encountered during storage and distribution of foods. Thus, validation at changing temperatures is of great importance for evaluating the performance of models in predicting shelf life under real chill chain conditions.

The achievements of WP3 in the project were initially to carry out an extensive survey in various traditional European food products in order to define the prevalence of pathogenic microorganisms (*Escherichia coli* O157:H7, *Listeria monocytogenes* and *Salmonella* spp.) and also describe their spoilage microbiota (coliforms, enterobacteria). The survey was not only confined in microbiological data, but also the physicochemical properties of the traditional foods have been recorded together with the shelf-life declared by the manufacturer. Results showed that traditional products are characterised by great variability, even within the same country,

concerning their microbiological condition and physicochemical properties. Concerning their safety, European traditional foods can be considered as safe as only in few cases low prevalence of pathogens was observed. The collected data were maintained in a database developed on MS Access software to facilitate retrieval of the data. In the future, the developed database can be supplemented with new information for other types of products and could thus become a useful management tool for the food industry and other specialists in the sector.

The mapping of different chill supply chains of traditional foods revealed the critical points that must be taken into account to increase safety. As temperature is a critical factor in product quality/safety, special attention was given on temperature monitoring in different parts of the distribution chain. Results showed that significant deviations were observed from the legally required temperatures in some steps of the cold chain. Specifically, consumer practices are not ideal, and as a consequence, perishable foods are kept at wrong (warmer) places in the refrigerator. Temperature abuse was also recorded in transportation trucks, retail cabinets and household refrigerators.

Factors such as food structure and microbial interaction become very significant in microbial growth, as models based only on liquid growth media may result in significant prediction errors especially under stressful environmental conditions (i.e. low temperatures). In tested conditions, gel texture (that imitates food structure) greatly affected the response of pathogenic bacteria (L. monocytogenes), especially maximum population size and maximum growth rate, which both decreased with increasing gel rigidity. The modular approach developed in Sym'Previus software takes into account bacterial growth rate measured in food ( $\mu_{opt}$ ) from which the impact of temperature, water activity, pH, organic acids have been extracted using Zwietering gamma concept.

Risk profiling developed for smoked fermented Greek for Salmonella spp., pathogenic Escherichia coli, and Listeria monocytogenes showed that risk scores were low for the low risk population while moderate risk scores were obtained for high risk population (pregnant women, children, and the elderly). This may explain the fact that smoked fermented sausages are considered as generally safe products. Only in case of use of cross-contaminated ingredients and application of inadequate fermentation process, Salmonella spp., L. monocytogenes and E. coli EHEC may survive posing a health risk for consumers. Moreover, risk assessment for traditional Hungarian smoked, naturally fermented, air dried and flamed sausages suggested that most of these traditional products surveyed are safe due to the processing technology applied and the intrinsic inhibitory factors. No growth of L. monocytogenes and S. aureus was observed in the majority of challenge tests for traditional Hungarian sausages. Predictive models, particularly for dynamic conditions and probabilistic approaches could provide a practical tool to improve risk profiles and support decisions.

Predictive microbiology knowledge is nowadays available in operational softwares for industrial applications which allow the simulation of microbial behaviour for more and more species in order to identify and control microbial hazards. Both Combase and Sym'Previus have been successfully used to provide realistic simulations and predictions of microbial responses in food. Finally, the new probabilistic module developed in the existing Sym'Previus software could provide better predictions suited to the needs of SMEs. As the databases of both softwares are continuously enriched with experimental data from the literature to quantify microbial responses not only on synthetic laboratory media but also on real food commodities, better predictions are anticipated in the future and hence the application by the industry is expected to increase.

#### IMPACT OF THE WP ON ITS INDUSTRY OR RESEARCH SECTOR

The industry will be benefited by the results produced in WP3 in various ways. First of all, the developed database will be a valuable source of information for the industry about the

prevalence of pathogenic microorganisms for a wide variety of traditional European foods. In the future, the database could be supplemented with new information for other types of products and could thus become a useful management tool for the food industry and other specialists in the sector.

Several production chains of different traditional European food products have been mapped and the critical control points (CCPs) as well as the critical hygiene points (CHPs) have been defined. Special flowcharts have been produced for the production chain of each examined commodity, as well as tables with the CCPs and GHPs. Special focus was given not only on the determination of critical points affecting microbial safety but also on the physical/chemical points that may affect the safety of the final commodity. The information provided in this report could become an important source of information for European food industries to increase the efficiency of the overall management of the food safety of traditional foods.

The risk profile sheet developed in WP3 is a quick, simple paper-based approach to Risk Assessment that allows the industry to recognize the features of the process and the product exerting the biggest influence on the level of risk. This method is a quick, well applicable tool for SMEs for the assessment of the risks presented by the production process and the chill chain and contains all the steps of risk assessment approach, namely hazard identification, hazard characterisation and exposure assessment.

Product specific models have been developed and validated that can be employed directly by the industry. In particular, the product specific model for the growth of *L. monocytogenes* in pasteurised vanilla cream under isothermal and dynamic (fluctuating) temperature profiles is already available in a user-friendly Excel sheet that can be used directly by the industry. The developed model was further validated under WP6 and proved to provide correct predictions under household refrigerator temperature profiles. Finally, the probabistic module of Sym'Previus developed in the context of the project provides information about the shelf-life of selected products based on only one challenge test carried out at one temperature. This facilitates the industry to avoid lengthy and unnecessary experiments.

#### **WP 4**

## IMPROVING NUTRITIONAL QUALITY OF TRADITIONAL PRODUCTS IN LINE WITH CONSUMER DEMANDS

The main objective of WP4 was to improve the nutritional quality of traditional food products in line with consumer demands, while maintaining or improving other quality characteristics recognised by consumers (e.g. safety, sensory, environmental impact and animal welfare).

Within the frame of this general objective, specific nutritional aspects of three types of traditional foods were considered in three tasks: 4.1 fatty acid profile and contents of vitamins, antioxidants and antihypertensive peptides in milk and cheese; 4.2 salt content in salted meat and fish products; and 4.3 contents of vitamins, antioxidants and microelements in fresh fruit and vegetables.

For each product, different innovations for improving the nutritional quality at production or processing steps were studied. Some of them, in the case of fresh fruit and vegetables, also aimed to reduce the environmental impact of production or the risk of chemical residues in the food.

Ten partners have participated in WP4: **IRTA**\* (Spain), ABIOC (France), GENUS (UK), INRA (France), Nofima-Mat (Norway), KIS (Slovenia), SARC (Slovakia), TEI-II (Greece), UMB (Norway), UMIL (Italy).

#### **METHODOLOGIES & APPROACHES EMPLOYED**

### Task 4.1: Identification of innovations which improve the nutritional composition of traditional milk and dairy products (months 1-48)

The aim of this subtask was to identify and check innovations for improving the nutritional quality of milk and cheese at production and processing steps.

#### Subtask 4.1.1: Primary production; animal group experiments (months 8-48)

The levels of saturated fatty acids (FA) in milk can be decreased efficiently in milk to the benefit of mono- and poly-unsaturated FA by diet supplementation in vegetable oilseeds. Nevertheless, when applied to diets poor in antioxidants, these supplementations could carry a risk of off-flavour in milk and dairy products due to the oxidation that may occur more rapidly in fat derived from polyunsaturarted FA enriched milk, if milk antioxidant compounds (mainly vitamin E) are not increased in the same time. The content of these nutritional components and other constituents of milk and the sensory characteristics of milk and traditional cheese produced by three groups of cows fed during five weeks a control diet based on maize silage, the same basal diet supplemented with extruded linseeds (5% oil from the linseeds) with or without vitamin E into the diet, were compared.

The long term effect of diet supplementation with vegetable oilseeds on the milk quality and also on the cow's performance was studied. Vitamin E was eliminated from the supplement because the results of subtask 4.1.1a, and more vegetable sources were studied. Five groups of cows were fed during two consecutive lactations with a same basal diet, high in grassland hay and silage, but supplemented or not (control diet) with different oilseeds supplements. The five treatments were: the control diet; this diet supplemented (3% of oil on a dry mater basis) with extruded linseeds; or with extruded rapeseeds; or with whole rapeseeds; or with fat-rich rapeseed meal.

Once daily milking, known to reduce the milk yield, on the milk nutritional quality was also studied. The animal performances and milk contents in carotenoids and vitamins A and E

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<sup>\*</sup> WP leader

were compared, during the first 18 weeks of lactation in three groups of cows milked twice or once daily with the calves removed at calving or staying with their mother until week 10 of lactation.

### Subtask 4.1.2: Characterization of the nutritional composition of tanker milk according to the origin and the breeders' practices in France, Slovenia, Slovakia and Norway (months 13-47)

Farms representing different origins and feeding practices were selected. From these farms, 375 milk samples were collected and analyses of a high number of compounds with a potential nutritional interest were performed ( $\beta$ -carotene, vitamins A and E, minerals (Ca, P, Na, K, Mg and Zn), fatty acids and phenolic compounds). In parallel to the milk sampling, surveys were made in each farm, in order to collect precise data concerning mainly cows' feeding practices, and to identify the milk production conditions leading to milk naturally rich in interesting compounds that could provide added value to breeders and industry.

### Subtask 4.1.3: Effect of starter cultures on the nutritional composition (biologically active peptides) of cheese (months 1-40)

The effect of 18 different combinations of *Streptococcus thermophilus*, *Lactobacillus helveticus* and *Lactobacillus delbrueckii* on the production of potentially bioactive peptides during hard cooked cheese making and ripening was studied. Thereafter, the impact of three different milk compositions and three different cooking temperatures in vat on such a production in the presence of two selected starter combinations was studied.

Additionally, immunological test for rapid detection of microbial peptidases in cheeses have been built. Mouse monoclonal antibodies have been produced from two protein fractions enriched in peptidases coming from a *Lactobacillus helveticus* culture, and then selected on their ability to react against peptidases. Immunological ELISA tests have been built from clones reacting against PepN, PepX and a protein chaperone GroEl.

### Task 4.2: Development of technologies to reduce the salt content in traditional ham and fish products (months 1-48)

### Subtask 4.2.1: Use of genetic markers to breed pigs adapted for production of low salted dry hams (months 1-48)

The potential use of genetic markers to identify the raw material exhibiting low proteolysis potential better adapted to the production of dry-cured hams with lower salt content was studied. More than 2200 hams have been genotyped in the three European countries (France, Spain and Slovenia) for PRKAG3 and CAST genes and processed according to the traditional rules of each country. A special processing with lower salt was done. Processing yields at different processing steps and chemical and sensorial characteristics of dry-cured hams were related to the genetic markers.

Additionally, proteomic analysis was performed on dry-cured hams to understand the mechanisms implicated in the sensorial properties and to find potential proteolysis markers of texture defects.

### Subtask 4.2.2: Development of analytical methods/protocols to assess the salt distribution in salted ham and fish products (months 1-18)

The knowledge of the salt distribution within the product during processing, i.e. measuring it in a non-destructive way would be very helpful to develop salt reducing strategies. A set of salted salmon samples covering a wide range of salt and fat contents was prepared and used for the calibration of the proposed technologies. The combination of three energies was evaluated for the calibration of a computed tomography (CT) device for the distributional salt content in salmon. The inclusion of fat content in the predictive models was also tested. After proving the

importance of fat content in the predictive accuracy, a NIR device was calibrated for fat content in salmon. The NIR information was added into the predictive model for salt content.

### Subtask 4.2.3: Effect of salting/curing technology innovations on the salt distribution and overall content in traditional ham product (months 1-45)

Different processing modifications leading to reduce the problems associated with the reduction of salt content in dry-cured ham (microbiological stability, flavour and excessive proteolysis leading to texture, flavour and appearance defects) were proposed and tested.

The effect of raw ham pH on salting process and on sensory quality of dry-cured hams was evaluated. Hams with different initial pH were processed with three different salting times and sensory analysis was performed at the end of processing.

The effect of novel boning-salting-binding technologies (with different binding ingredients, packaging materials and shaping) was evaluated in dry-cured hams dried at different temperatures. This technology accelerates the salt distribution.

The effect of K-lactate (potential antimicrobial agent) on the salting process, the microbiological stability and the sensory characteristics of dry cured ham was evaluated in meat models and in hams. K-lactate was added by injection to bone-in hams and by massage to boned hams.

A NIR device was adapted and calibrated to carry out the measurements of moisture and NaCl on meat samples and on dry cured ham surface, which has been related with the crust development.

The CT methodology developed in salmon fillets for the non-destructive distributional analysis of salt content was adapted and calibrated for dry-cured hams. This methodology was used to modify the processing temperature setups for hams with reduced salt content.

High Pressure processing (with a known beneficial effect on microbiology stability) of sliced dry-cured hams with reduced salt content was studied at different processing steps.

Freezing and mild thermal treatments were evaluated for reducing white film development on the cut surface and pastiness of dry-cured hams with reduced salt content.

### Subtask 4.2.4: Effect of salting/curing technology innovations on the salt distribution and overall content in traditional fish products (months 19-45)

New salting methods for salmon were proposed and evaluated. In a first experiment, salmon fillets were subjected to three different salting techniques (dry salting, brine salting and brine injection). For each salting technique, three average salt levels were aimed for using different salting duration (dry salting) and brine strengths. Additionally, three different salmon weight classes were used for all techniques and salt levels in order to span size and fat content levels. A distributional salt content analysis by CT and NIR devices was performed. In a second experiment, the amount of NaCl was reduced in two different ways: by lowering the added NaCl, and by substituting part of the NaCl by KCl. In order to get a controlled and evenly distributed amount in NaCl in each fillet, brine injection was one of the production methods. Traditional dry salting was also included as a reference, using both normal and reduced NaCl levels. In a third experiment, the reduced-NaCl smoked salmon was compared to the control with respect to sensory profiling and consumer preference. The production protocol developed in the second experiment was used to reduce the NaCl content by partial substitution with KCl. In order to get a controlled and evenly distributed amount of NaCl in each fillet, brine injection was one of the production methods. Traditional dry salting was also included as a reference, using both normal and reduced NaCl levels.

### Task 4.3 Identification of innovations which optimise the nutritional composition of traditional fresh fruit and vegetable products

Subtask 4.3.1: Effect of agronomic innovation strategies on pest and the nutritional composition of tomato fruit (months 10-36)

The objectives were: i) to quantify the effect of chitin and resistance elicitors -e.g. plant extracts such as Milsana® on the content of nutritionally relevant compounds, incidence of foliar disease and crop yield, including lycopene/carotenoids, flavonoids and vitamin C. ii) to compare the nutritional quality of traditional, regional tomato cultivars used in Mediterranean countries with varieties used in large scale commercial production and iii) to identify interactions between: a) variety choice, b) foliar elicitor sprays and c) the ripening stage at harvest.

To achieve these objectives, two experiments were carried out. The first one (*Effect of foliar elicitor treatments -Milsana® and Chitoplant®- on the nutritional composition, foliar disease incidence and yield in traditional tomato production systems*) was performed to investigate the first objective and was held in Greece. The second experiment (*Effect of variety, N level in the nutrient solution and elicitor treatment on the nutritional quality of regional Mediterranean and commercial tomato varieties*) was set up to investigate the second and third objectives and was held in Spain.

# Subtask 4.3.2: Effect of agronomic innovations (e.g. fertility management system and/or netting, companion plants and/or environmental diversification systems used for pest control) on the nutritional composition of field-grown Brassica and lettuce crops (months 7-46)

This subtask, aimed to quantify the effects of environmental diversification systems such as companion plants on the incidence of disease and in particular pest incidence and yield and nutritional quality of lettuce crops; and to identify agronomic strategies which have the potential to increase the nutritional quality of *Brassica* crops (elicitors, variety choice and fertility management practices). A survey study on *Brassica* from six farms using intensive (mineral fertiliser based) and six farms using traditional (legumes and organic matter inputs) fertilisation systems was done.

A field trial was performed with three varieties (differing in characteristics such as growth habit, speed of development and/or disease/pest resistance) of *Brassica*. Plants were fertilised with two different basic fertility inputs (manure based compost or mineral fertilizer; fertility main plots). Half of each fertility main plot was treated with a foliar spray of chitin (a compound known for elicit resistance responses in plants) preparation, while the other half remained untreated.

A replicated field trial was performed in which lettuce crops were established with different densities and compositions of environmental diversification. Pest incidence during production and yield and nutritional quality of lettuce was evaluated on the final products.

#### ACHIEVEMENTS OF THE WP TO THE STATE-OF-THE-ART

#### Milk

Previous EU and national government sponsored research have indicated that an efficient alternative to improve the nutritional quality of dairy fat was the supplementation of the cows' diet with vegetable seeds rich in polyunsaturated fatty acids (FA). Nevertheless, little was known on the consequences of such diet supplementation on (a) the sensory properties of milk and dairy products and (b) on the performances of cows on the long term.

The short-term study achieved in experimental conditions showed that the supplementation of a maize silage-based diet with extruded linseeds (ELS) induces large variations in the milk fatty acid profile, notably in decreasing saturated FA percentage (-18.5 g/100g fat) and increasing the mono- (+15.6 g/100g fat) and poly-unsaturated (+3.2 g/100gfat) FA. The addition of vitamin E had only a moderate effect on some milk FA (12:0 to 16:0, 18:0 and trans13-18:1). The ELS supplementation was not responsible of any off-flavors in raw milk or cheeses ripened 8 and 12 weeks. The ELS supplementation, with or without vitamin E, reduced the firmness and increased melting texture of cheese, but within acceptable limits. Thus, the supplementation of maize-based diets with ELS is efficient to improve the nutritional quality of cheeses fat (even if it also increases the trans isomers of 18:1) without negative impact on the sensory properties of milks

and cheeses, at least in our experiment conditions in which pro-oxidant situations such as long conservation or light exposure were not applied on the dairy products tested.

On the long term, the effects of oilseed supplementations on dairy performances were of limited extent. The improvement of the milk fat nutritional quality was stable during two consecutive lactations and comparable to observations from short-term study. When cow consumed grass silage and hay, the benefits of oilseed supplements on milk fatty acid profile was important: decrease of medium-chain FA (-12.7 g/100 g FA) and increase of cis9-18:1 (+6.6 g/100 g FA). However, the content of milk *trans* FA was also increased by processed oilseed supplementations (+3.4 g/100 g FA). The effects were also observed when cows grazed pasture, but were weaker, suggesting that when cows are grazing, the diet supplementation has no practical interest.

The milk losses due to once daily milking (ODM) were about 36% during the first 18 weeks of lactation and average weight losses were reduced in early lactation. ODM also increased milk fat and protein contents. Keeping the calves with the cows in early lactation did not permit to increase the milk yield of ODM cows when the calves were weaned. ODM increased the yellow colour of milk due to a corresponding increase in  $\beta$ -carotenes concentrations (+7 to 28 % according to periods of lactation and calves presence or not with the cow). However, it did not permit to increase significantly vitamins A or E concentrations in milk. Thus, ODM is an interesting strategy to increase milk fat and protein contents but it is responsible of important losses and it does not permit to obtain milk with an increased nutritional quality.

The work performed to describe the nutritional composition of milks sampled in various situations in Europe revealed the particularly high 'natural' variability that exists for most of the compounds analysed. An important part of this variability is linked to the farmer's practices, in particular the nature of the forages used to feed the animals. During the overwintering period when cows are fed with preserved forages, milks are the richest in minerals and saturated fatty acids while, during the pasture period, milks are richer in vitamins A and E, in unsaturated fatty acids and also in most of the phenolic compounds identified. This work also revealed that FTIR is an interesting tool to predict the milk fatty acid composition. The results underline the interesting potential that exists for dairies to select and sell milks that differ greatly in components with a nutritional interest. Nevertheless, due to the very large influence of seasonality on milk composition it will certainly be difficult for dairies to identify tours giving milks with high nutritional value throughout the year.

#### Cheeses

Differences were observed according to starter combination and ripening time of cheeses for the production of potentially bioactive peptides, and among them anti-hypertensive (*in vitro* anti-ACE activity), and in a lesser extent the phosphopeptides. Milk and temperature in vat affected also this production. The levels of these different classes of peptides, particularly anti-hypertensive, were related to an optimum degree of proteolysis, which depends on a conjunction of starter composition, milk composition and processing conditions that both affect starter growth, and time of ripening that determines the progress of proteolysis. Sensory characteristics of cheeses varied accordingly, but within acceptable limits. These results were validated at industrial scale (WP6.1.7). Through this work cheese-makers have the possibility to select the most adapted combinations of starters to enhance the production of potentially bioactive peptides in the cheeses. The maximization of anti-hypertensive peptide content is linked to an optimization of proteolysis patterns and related modifications of sensory characteristics. The selection of appropriate starter combination requires taking into account milk composition, processing conditions and ripening time, to optimise the levels and the nature of the potentially bioactive peptides to be produced.

#### Dry cured ham

The incidence of genes PRKAG3 and CAST in hams, selected by the quality criteria used by industries, was different in each country. Moreover, the gene effect on green or dry-cured hams was country dependent. In Spain, the mutation of PRKAG3 had a significant influence on pH<sub>SM</sub> green hams. In Slovenia, PRKAG3 and CAST249 had a significant effect on carcass and green ham traits; PRKAG3 also showed an effect on salting loss during processing. In France, CAST249 affected leanness and muscle size. With respect to dry-cured ham characteristics, an effect of PRKAG3 was observed on textural properties of Slovenian dry-cured ham "kraški pršut" and French Bayonne ham, whereas the effect of CAST was negligible. In contrast, pastiness was significantly affected by CAST249 in Spanish Serrano hams. It is worth noting that the effects of genes were producer dependent, indicating that the processing procedure is of importance when considering gene expression on a product. Considerable insights have been provided on the mechanisms implicated in the sensorial properties of these three traditional products. Potential proteolysis markers of pastiness were found and specific protein-maps could be assigned to the product quality. In the future, the application of routine test to detect these markers could be envisaged.

Calibration models in salmon fillets for distributional fat content, using a non-contact NIR system, and for distributional salt content, using a computed X-ray tomography system, were delivered. The average prediction errors in each point were 1.74 % for fat content of raw fillets and 0.34% for salt content of salted fillets. The correlations between predicted and reference values were above 0.95.

The pH of raw hams affected the salt uptake and extreme pH hams showed defective texture. The use of pH as a selection criteria reduced the variability in the salt uptake and reduced the incidence of hams with pastiness, red rings and phosphate crystals. Cohesive boned hams were obtained by means of a novel boning-salting-binding technology, showing no sensory defect if they were dried up to 50% of weight. The addition of K-lactate did not modify the salt distribution within the ham, it reduced the microbiological growth and it had no negative impact on the sensory quality of boned hams, but the injection of K-lactate in bone-in hams had microbiological problems. Therefore, the use of K-lactate should be restricted at the moment to boned hams.

The definition of temperature setups of processing by means of a calibrated CT, which monitored the distribution of salt and water contents during the process, made it possible to obtain hams with reduced salt content without additional microbiologial risks. The definition of relative humidity setups of processing by means of a calibrated NIR, which monitored the water content and the water activity at the surface, made it possible to avoid the crust development on these hams.

Texture excessively soft was improved by applying High pressure process (HPP), 600MPa, and mild temperature treatments (30-35 °C for 24-48 h) on dry-cured hams. Moreover, HPP increased the salty perception of hams. Freezing dry-cured hams at -25 °C and -60 °C reduced the development of white film, and avoided the defect in those hams more prone to present it (hams with reduced salt content). Finally, two proposals for specific processes for both bone-in and boned dry-cured hams with a reduced salt content (about 50%), describing these technologies in detail, were delivered.

#### **Smoked salmon**

Smoked salmon with reduced salt content produced by replacing one third of the NaCl by KCl had no significant differences in taste, colour or texture with respect standard salt content and consumers showed equal preference for both salt levels. Brine injection reduced the salt content heterogeneity between and within salmon fillets, but brine-injected fillets showed significant differences in sensory characteristics with respect the dry-salted fillets, and consumers tended to prefer the dry salted products when subjected to blind tasting and informed choice.

#### Plant products

In the experiment held in Greece, the use of the two elicitors (Chitin and Milsana®) in tomato crop performed (growth and yield) similarly and, in most cases, elicitors have shown to have a positive effect against powdery mildew disease of tomato. Concerning the nutritionally quality of tomatoes both Chitin and Milsana® gave mean values for both vitamin C and flavonoids higher or comparable to those detected for treatment using Sulphur or not treatment. As a conclusion of this experiment, Milsana® at medium dose exerted a positive influence during fruit development.

In the experiment held in Spain, the commercial variety "Caramba" performed better when plants were sprayed with Milsana® than when sulphur (control treatment) was used; and only the local variety "Montserrat" was negatively affected by the low dose of nitrogen. Concerning the nutritional quality, variety and ripening stage played the main roles on carotenoids, vitamin C, flavonoids, caffeolylquinic acid derivatives and mineral levels, while elicitor and fertilization exerted only limited effects. Low-nitrogen fertilization increased the level of vitamin C and two target flavonoids if compared to high-nitrogen supplied samples.

To sum up, two conclusions can be stated. Firstly, the use of elicitor appears not to be a suitable strategy to influence the nutritional quality of tomato. Nevertheless, Milsana® must be considered as a factor for effective control of powdery mildew with no environmental pollution or farmer hazard. Secondly, variety seems to be the most important factor to influence nutritional quality in combination with fertilization and ripening stage. When tomatoes are consumed at ripening stage 5 (green-red tomato), the local varieties could be more interesting from a nutritional point of view.

The effects of the agronomic strategies on the nutritional quality of Brassica have been analyzed. The variety and the fertilization factors had the major effect on yield and nutritional quality. A late season variety showed similar production for both mineral and organic fertilizer treatments. In contrast, mineral treatment produced higher yields for early and mid-harvest varieties. Green varieties (Trevi) had the highest levels of vitamin C, total sinapic acid derivatives, Fe, Na, and Ca. Chitin treatment increased the levels of glucosinolates for treatments with organic fertilizers. Therefore, when organic fertilizers are used, the late season variety would be more adequate to maintain the production and the elicitor treatment would improve the nutritional quality.

Providing plant resources in the field and avoidance of pesticide treatments ensured the presence of key predators in lettuce crops: adult hoverflies were attracted and aggregated on flower patches, and predatory bugs did establish in the insectaria plants. Being highly mobile, predators dispersed to plots without flower patches and established on lettuce plants unless limited by pesticide treatments. As a result of predator establishment, prey populations were reduced below the economic threshold. Moreover, no other pests were recorded from the lettuce crops as a result of adding the insectary plants. The innovation of environmental diversification with companion plants showed great potential for aphid and thrips control in spring lettuce, and that traditional practices based on pesticide sprays against both pests may not always be necessary. However, any difference among treatments in regards to yield or quality components was found. This indicates that such innovation will not represent a loss for the grower, but it will contribute to the development of more sustainable agricultural productions, which in the long term may also enhance quality of the yield.

#### IMPACT OF THE WP ON ITS INDUSTRY OR RESEARCH SECTOR

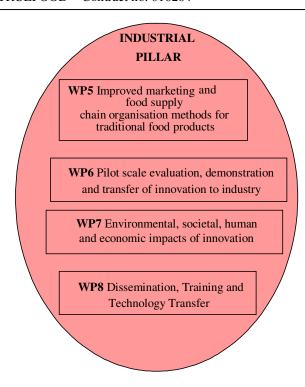
WP4 delivered innovations, at both the primary production and processing stage, which increased the nutritional composition of traditional foods. Nutritional benefits (e.g. higher levels of antioxidants, vitamins, minerals, polyunsaturated fat or reduced levels of salt and residues of pesticides) are increasingly demanded by consumers. WP4 has therefore increased the

competitiveness of traditional production systems by delivering nutritional and "health related" benefits desired by consumers.

The use of organic fertilizers, elicitors or environmental diversification at primary production also reduces environmental pollution and potential health risks, which contributes to the strategy of expanding "low input" food production systems.

In addition, different innovations applicable to the process or product control have also been delivered: FTIR to predict the milk fatty acid composition; NIR to predict fat content in salmon or crust development in dry-cured ham; ELISA to evidence the presence of the peptidases from *L helveticus* in the cheeses; CT to predict the distribution of salt and water contents in salmon and dry-cured ham. FTIR and NIR can be directly used by industry to control the processes, which increases the competitiveness of industries, or to characterize the nutritional quality of products, which adds value to the traditional foods.

ELISA and CT can be used at laboratory or pilot plant scale to validate or design new processes. These technologies will have an important role in the process optimization, which is a key factor in the competitiveness of industries.



The main strategic objectives of the **Industrial** Pillar of TRUEFOOD are very interconnected and linked to the results obtained from the Scientific Pillar of the project, in particular to:

- identify, evaluate and transfer into the industry innovations that guarantee food safety, especially with respect to microbiological and chemical hazards:
- identify, evaluate and transfer into the industry innovations that improve the nutritional quality, while at the same time maintaining or improving other quality characteristics; recognised by traditional food consumers (e.g. sensory, environmental, animal welfare and ethical qualities);
- support the marketing and supply chain development of traditional food products;
- establish an effective and sustainable system of technology transfer of innovations (those developed within the TRUEFOOD projects and in other EU, national and industry funded R&D into traditional food projects) specifically focusing to SMEs.

#### WP5

#### Improved marketing and supply chain organisation methods for traditional food products

The overall aim of WP5 was to improve marketing and supply chain structures for traditional food products. Therefore, specific objectives of WP5 were: to identify and quantify the determinants of bottlenecks and success factors that SMEs active in the sector of traditional foods are confronted with; to compare the functioning of traditional food supply chains (meat, dairy, vegetables, beverages) within and across 3 member states; to compare the perspective of food producers with that of consumers on bottlenecks and on success factors; to develop a benchmark instrument relative to marketing effectiveness enabling traditional food companies to evaluate their current position; to develop indicators to determine the overall chain performance; to evaluate the feasibility and acceptability of possible approaches to improve marketing capabilities; and to analyse the potential impact of innovative distribution systems for traditional foods.

The approach in WP5 has been to start with a qualitative approach, followed up with a quantitative approach (several surveys) to gain detailed and specific knowledge about the innovativeness, marketing capabilities and performance in traditional food chains.

Four partners have participated in WP5: Ghent University\* (Belgium), Campden BRI (Hungary), University of Milan (Italy) and PEGroup (Italy)

\* WP leader

#### METHODOLOGIES & APPROACHES EMPLOYED

### Task 5.1: Determinants of bottlenecks and success factors of traditional food producers (months 1-48)

This task started with the set up of a working definition of traditional food products from a business perspective and the selection and description of chains in 6 traditional food sectors in 3 countries. Then, an overview was produced on bottlenecks and success factors relating to chain and marketing management capabilities of traditional food producers. The determinants were identified by focus groups and quantitative survey with 270 companies. Furthermore, an inventory of 48 best practice examples for the innovative use of chain and marketing resources and capabilities was compiled. Besides, the results from the traditional food sector were compared to the results from the consumer part of the project (WP1) and from interviews with support organizations (WP5), which highlighted further areas for the innovative use of chain and marketing resources and capabilities. In addition, a guideline for carrying out questionnaire surveys with food chain members was developed based on the practical experiences of the interviews. Recommendations based on results from task 5.1 were finalized after debate with stakeholders in round table discussions in 3 countries.

## Task 5.2: Benchmark for evaluating marketing management capabilities of traditional food producers (months 1-48)

A questionnaire was developed in order to produce a benchmark of traditional food producers. This on-line benchmark tool was consulted by 440 firms from 15 EU-countries. Next, the results were analysed in order to identify best performers in terms of marketing management and their characteristics. Next, an extended survey was developed for investigating the competitiveness of the traditional food sector extending it from the company to the chain level..Recommendations were finalized after debate with stakeholders in round table discussions in 3 countries.

#### Task 5.3: Indicators of overall traditional food supply chain performance (months 1-48)

A graphical and conceptual tool to map chains in order to describe the interrelationships within traditional food chains was developed. Besides a systematic approach for identifying chain goals was established. Next, a chain performance measurement tool and an instrument to measure the quality of chain relationships were developed. The tool and the instrument were used in a survey with 270 companies in 6 traditional food product categories. 12 chain strategies were developed as example of possible goals, action plans, responsibilities and resources and articulated in detailed action plans. Recommendations were finalized after debate with the according stakeholders in round table discussions in 3 countries.

#### Task 5.4: Innovative distribution strategies for traditional food products (months 12-48)

The complexity of the distribution chain in the traditional food sector was mapped based on expert experiences and findings from the literature. More than 260 ideas were collected during brainstorm sessions, consequently grouped under 3 main categories (supply chain management, marketing management, and innovation). 12 innovative distribution strategies were developed and discussed during strategy-review meetings in 3 countries in order to evaluate their suitability, feasibility and acceptability by a wide range of experts, i.e. traditional food producers, other chain members, support organizations and policy makers.

Recommendations were finalized after debate with the according stakeholders in round table discussions in 3 countries.

#### ACHIEVEMENTS OF THE WP TO THE STATE-OF-THE-ART

The main achievements of WP5 to the state-of-the-art are listed as follows:

#### Definition of traditional food products for quantitative and qualitative research

WP5 developed a research definition from a business perspective and amalgamated it with the definition provided by WP1 (consumer part) including strong connection to the region (locality) of production, the specific way of production, gastronomic heritage, and the authenticity and time factor; moreover the traditional products can be distinguished and known because of their sensory properties. This definition can be used as a verified, practically applicable starting point for quantitative and qualitative research but for research purposes only not for legislative category definition.

#### **Practical use of Food Chain Management for SMEs**

The main benefits of implementing food chain management principles for traditional food producing SMEs were identified and clearly listed.

#### A tool for identifying bottlenecks and success factors

A systematic approach was developed for identifying bottlenecks and success factors in traditional food chains based on a checklist for screening the determinants of the supply chain and marketing management capabilities and resources. This tool can be adapted to other food chains as well. The results are evaluated for whether they represent a bottleneck or a success factor and their cause is specified as well. At each aspect it is checked systematically whether the lack of availability/existence of information, chains organisational structure/measure and physical/financial/human resource is a hurdle or an enabler. The macro and microeconomic environment of the country and the differences in the resources of the micro, small and medium sized companies should also be considered.

#### Typical bottlenecks and success factors of traditional food chains

The major bottlenecks of traditional food chains and the main success factors related to the supply chain and marketing resources of traditional food producers are identified related to the chain and marketing resources of traditional food producers. As an additional tool, a guideline was developed for providing advice to researchers how to carry out a questionnaire survey with interrelated food chain members.

## An inventory of best practices of traditional food chains on exploiting supply chain management and marketing management resources.

An inventory of successful cases, to provide structured information for SMEs and other food businesses manufacturing, was developed for motivating SMEs, manufacturing traditional food to explore new methods, techniques for identifying new opportunities of innovation through combining resources and capabilities of the chain members along the whole chain. This may be a useful practical tool, since many SMES prefer to learn from each other and to follow successful examples.

#### Sources of knowledge by geographical distance

The innovation capacity of the companies has an influence on the geographical distance of knowledge sources. The companies with low innovation capacity prefer local help, while for the SMEs with higher innovation capacity find the support they need from longer geographical distances, mainly from national, but to a certain extent at European level.

#### Importance of innovation along the chain

The type of innovation activities applied by chain members show quite different patterns in the investigated countries: in Italy and in Hungary the most frequent activity was the improvement of the quality and packaging; the main innovation activities applied in Belgium are networking, improving the quality, entering new geographical markets and improvement of packaging. It is important to mention that the frequency of networking is at a remarkable higher level in Belgium than in Italy or Hungary.

#### Importance of networking and collaboration

Evidences were found for the benefits of collaboration and networking between partners along the food chain and peers in improving the capacities of SMEs for and increasing their success in innovation, marketing management and distribution. The main areas of collaboration were sharing knowledge, common thinking and joint use of resources.

It is worth to mention that significant differences can be observed between countries and different types of chain members.

#### A new potential for support organisations to assist SMES in market access and innovation

Currently only a small part of the support organizations is promoting the collaboration between chain members. Both the traditional food SMEs and the majority of the support organizations need training on the principles of chain management. There are unexploited opportunities for SMEs in the systematic application of chain management and marketing management principles and the support organizations, particularly the food industry federations are well placed to provide assistance in that for their chain members.

#### Evaluation of marketing management capabilities of traditional food producers

Through the use of a self-registered questionnaire, it was found that the most problematic aspects for SMEs are "Organisation" and "Evaluation". This means the main weaknesses of SMEs related to marketing management lie in the area of planning and implementation as well as control and evaluation of their marketing activities. SMEs appear to analyse the situation of the market, to set a strategy, but they are not able to organise well their resources in order to obtain profits, they do not plan in advance, and just react when there is an effective need. They do not check the results obtained, and if they are in line with the pre-determined objectives.

## Targeted action plan for increasing the marketing management capabilities of traditional food producers

A targeted action plan was developed for increasing the marketing management capabilities of SMEs. Micro and small firms must be treated differently than medium and large firms because they have limited financial and human resources. The firms altogether should be more aware of the competitive situation of the market where they operate by analysing the sector starting from the local level.

#### Investigating the competitiveness of the traditional food sector

From the totality of the cases analysed, it is demonstrated that, for the achievement of competitive advantage, the main resources are: the knowledge of the entrepreneur, well qualified staff, long term partnerships with suppliers and customers, reputation, and information from marketplace. The most important capabilities are: suppliers' selection, product and quality management, and customer service. The most important competencies at chain level are the relationships with suppliers and customers, in order to maintain the good quality of the products, and, on the other side, to obtain information from the market.

#### A graphical and conceptual tool to map chains

A graphical and conceptual tool was produced to map chains. It builds upon a network representation where all members of the chain are illustrated in one sheet (as nodes) and the linkages between them are indicated (as arrows). By drawing the whole structure of the chain, a complete outlook of the structure of the chain is made transparent. The graphical and conceptual tool to map chains can depict and lay down the quality of the interrelationships, by assigning meanings to the colours of the arrows.

#### A systematic approach for identifying chain goals

A systematic approach was developed for identifying common, conflicting and divergent goals of chain members of traditional food chains which can be adapted to other food chains as well. This tool can be used for setting chain goals, based on which chain performance measurement instruments can be developed. Depending on the chain members' interest, economic, ecological, as well as environmental goals can be included in the analysis. Within WP5 five key chain goals and 11 sub-goals are identified related to traditional food chains.

A detailed description is published in (Molnár et al., 2009).

#### Supply chain performance measurement tool

The quantitative survey demonstrated that performance is linked with the quality of chain relationships in a way that higher performing chains score significant higher trust, economic satisfaction, social satisfaction, dependency, non-coercive power and reputation than lower performing chains, while lower coercive power and conflict than lower performing chains. Reputation is the relationship measure showing the largest discriminating power between the different performing chains. It means that traditional food chains, composed of chain members having a highly appreciated business reputation, score the best.

#### Instrument to measure the quality of chain relationships

The quality of chain relationships is one of the central questions in chain performance measurement. Relationship measures should be included in chain performance measurement instruments as possible performance determinants. Still, relationship measures are not extensively included into chain performance measurement A theoretically grounded instrument was developed to measure the quality of chain relationships. Specific results and the general insight of the quality of the interrelationship as a powerful element in the supply chain are carefully are described in Molnár et al., (2008), Molnár and Gellynck (2009), and Gellynck and Molnár (2009b).

#### **Taxonomy for chain governance structure identification**

The identification of chain governance structures is especially useful in case of chains where one chain member has a significant power over the others and there is a need to rebalance this. This is a very vital and critical precondition in each step of the supply chain to make business profitable, however it is particularly important for traditional food producer SMEs.

A more detailed description is published in (Gellynck and Molnár, 2009a).

#### **Innovative chain strategies**

12 chain strategies were developed as example of possible goals, action plans, responsibilities and resources. The twelve strategies have been articulated in detailed action plans, submitted to the enquiry and judgement of traditional food chain members in three countries (Italy, Belgium and Hungary), collecting their reactions and suggestions. The choice was made taking into account the key factors that affect chain performance as well as suggestions from stakeholders' view collected during the surveys.

#### Overview of the complexity of the distribution chain

The distribution chain can have a number of levels. The simplest level exists, when there is a direct contact between producer and end-user with no intermediaries involved. The next level, when there is one intermediary (e.g. in consumer goods a retailer, for industrial goods a distributor). In large markets (such as larger countries) a second level, a wholesaler for example, is now mainly used to extend distribution to the large number of small, neighbourhood retailers.

#### 12 developed innovative distribution strategies based on stakeholder evaluation

Each of the twelve strategies has a detailed action plan and an analysis of strengths, weaknesses, opportunities, and threats were conducted. Each strategy was evaluated by traditional food chain members in three countries (Italy, Belgium and Hungary), providing comments on their suitability, feasibility and acceptability.

## Detailed Action plans for each developed strategy & indication of relative resource intensity for each strategy

Each action plan includes a list of action steps (tactics) listed in chronological order. The final choice of the best fitting innovative chain or distribution strategy is in the hand of the traditional food manufacturer and his/her chain members. The successful implementation of a strategy is dependent on the product's requirements, the firm's/ chain's resources and capabilities, as well as on the environment the traditional food manufacturer and his/her chain is operating in.

#### IMPACT OF THE WP ON ITS INDUSTRY OR RESEARCH SECTOR

During the work of WP5 the research partners focused also on a tailor-made approach of the results for the traditional food sector. The developed tools and instruments under WP5 can be used by both, researchers and industry. In particular in the recommendations, the results are again summarized in an easy understandable language and suited to the specific problems and success factors of different stakeholders.

#### WP6

# Improved marketing and supply chain organisation methods for traditional food products

The **overall objectives of WP6** are to validate and demonstrate innovation on an industrially relevant scale

- ➤ 10 demonstration subtasks have been performed under task 6.1
- ➤ 2 tasks dedicated in one hand to the generalization and application to other traditional food products by the use of models and in another hand to the collection of all results from TRUEFOOD activities which can be used by European industry have been performed.

#### **Partners involved: ACTIA\*** (FR)

ACTILAIT, ADIV, ADRIA Développement, ADRIA Normandie, LNE as third parties of ACTIA – INRA (FR), ENEA (IT), ETAT (GR), IRTA (SP), ICT (CZ).

#### METHODOLOGIES & APPROACHES EMPLOYED

Validation of scientific knowledge at pilot scale and/or industrial scale on a range of products and/or processes studied under research WPs

#### Constraints taken into consideration for the selection of the 10 demonstration activities:

- ✓ identification of promising research results performed under WP2, 3A, 3B, 4 and 5
- ✓ cost/benefit ratio critical for SME's adoption,
- ✓ food safety aspects, legislation,
- ✓ integration on existing production lines,
- ✓ environmental impacts, differentiation criteria for innovated TFP
- 26 industrial companies have been involved in the 10 « demonstration » sub-tasks, among them 15 are SMEs
- 2 main sectors targeted: dairy products (cheeses) and meat products
- A real strong implication of all the partners involved in WP6 has been noticed.

#### ACHIEVEMENTS OF THE WP TO THE STATE-OF-THE-ART

#### Main results with potential application in industry

#### Dairy sector and cheese manufacture

Creation of microbial consortia exhibiting anti Listeria activity for the fabrication of traditional French cheeses (Saint Nectaire and Pont L'Evêque) and applicable to other European traditional cheeses – INRA, ACTIA (ADRIA, ADRIA NORMANDIE) (FR)

The initial objective was to propose to small cheese producers microbial complex consortia which could improve the safety of their cheese (inhibition of *Listeria monocytogenes*) without affecting their sensorial properties (flavour, aspect). ADRIA Développement and ADRIA Normandie have collaborated efficiently with INRA in this sub-task working especially on Pont l'Evêque cheeses.

Interesting results were obtained in PDO Cantal cheese (after addition of the consortium, *L. monocytogenes* was present neither in the surface nor in the core of the assay cheese

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<sup>\*</sup> WP leader

whereas it was detected in the control cheese) and Pont l'Evêque cheeses (reduction *L. monocytogenes* growth).

Assays in cheeses naturally contaminated with L. monocytogenes or produced by artificially contaminated milk are very promising and can be extended to other kind and type of cheeses.

 Specifications for new air monitoring strategies based on sequential ventilation and allowing reduction of energy consumption in cheese ripening rooms applied to Saint Nectaire French cheese but applicable to other European cheeses – INRA (FR)

The main purpose consists in validating a new control strategy air flow monitoring in cheese ripening rooms. The trials are performed using a prototype for measurement and control installed in a industrial cheese making factory (Les Fromageries Occitanes - Lanobre). The reduction of energy consumption which is expected has been determined by performing comparative trials involving changes in ripening room control and air flow monitoring.

As good results have been obtained, Les Fromageries Occitanes have decided to invest in a new control system allowing easily to use sequential ventilation and disconnection of the heating.

More generally, it can be recommended to cheese industry to study how these results could be generalised to the large number of ripening rooms used for cheese production in Europe. A double approach can be suggested: (1) the introduction of sequential ventilation, (2) the improvement of the ripening room control procedures in order to modernise them.

- Construction of a respiratory cell available for studying wrapped and unwrapped cheese ripening in controlled conditions of temperature, relative humidity and CO<sub>2</sub> / O<sub>2</sub> content for industrial use and for better understanding for wrapping films properties (gas and water permeability) for support in designing and selecting the accurate films as a function of expected cheese evolution INRA, ACTIA (LNE)(FR)
  - The main objective of this action was the designing of a lab scale (15 L) ripening respiratory cell in order to follow up cheese respiratory activity during ripening and under packaging (allowing the comparison of different packaging devices for cheeses).
  - An attempt is in progress in order to set up industrially the respiratory cells designed in this study. Cheese packaging appeared as a key factor to master the quality of ripened cheeses proposed to the consumers. The choice of wraps, often empirical, could be improved knowing the ripening behaviour occurring after ripening.
- Fabrication of new packaging films treated with antimicrobial substances able to increase the shelf life of traditional cheeses INRA, ACTIA (LNE)(FR)
  - The main objective consisted in testing, on pilot scale, some of the active packaging films selected and characterized during research activities (WP2B).
  - This subtask has demonstrated that active compounds are transferred from the packaging into the food in a sufficient way to be effective and that it can contribute to improve the shelf-life of low salt content food. This effectiveness is very depending on the film material used and the contact between the film and the content. Applications with different kind of cheeses have been performed and some of them were very successful improvement of cheese shelf life and a better capacity to preserve quality during ripening process.
- Methodology for the selection of the most adapted combinations of thermophilic starters for cheese makers to enhance the production of bioactive peptides in cheeses. The maximization of anti-hypertensive peptide content is linked to an optimization of proteolysis patterns and related modifications of sensory characteristics – INRA, ACTIA (ACTILAIT)(FR)

Improving the nutritional composition of hard cooked cheeses by enhancing their content in potential bioactive peptides (BAPs). BAPs represent a new challenge in terms of nutritional composition. They become an increasing field of research, due to highly valuable potentialities, from anti- hypertensive or anti-carcinogenic properties to a function of transfer of oligo-elements through the intestine wall. In hard cooked cheeses research activities (WP4) have demonstrated a possible way to improve the amount of such compounds by choosing appropriate strains of thermophilic starters. The work performed confirms results obtained in model experimental cheeses, i.e. we are able to optimize anti- hypertensive or anti-carcinogenic properties through the choice of thermophilic lactic starter combination. However the maximization of anti-hypertensive peptide content is linked to an optimization of proteolysis patterns and thus modifications of sensory and presentation (eyes, cracks, splits...) characteristics are observed according to the thermophilic lactic starter combination.

• A predictive model to manage shelf life and safety of non-acidic dairy desserts based on the growth of Listeria monocytogenes is available – ETAT (GR).

The products studied in this subtask are green olives (fermented process) and non acidic dairy desserts.

Setting up of this predictive model has been realized by, measures and parameters recording in a first time, and then application of modelling and adjustment.

Prediction performance for Listeria Monocytogenes in non acidic dairy desserts is really acceptable.

This predictive model can be used at industrial level for non acidic dairy desserts products.

#### Meat sector and delicatessen

<u>Selection of one very efficient strain of Lactic acid bacteria inhibiting Listeria</u> monocytogenes in fresh pork meat and dry fermented sausages – ACTIA (ADIV)(FR)

Two LAB strains have been selected for their very good activity against the pathogens tested (*Listeria monocytogenes* and *Staphylococcus aureus*). In the context of the demonstration step, a meeting gathering French industrials to introduce consortia activity with special trials has been organized. The trial carried out on an industrial site permitted to validate the anti-*Listeria* activity of the *Lactobacillus* strain DM3. Concerning industrial applications, ADIV was approached by a starter cultures provider who would be interested to produce this bioprotective culture under lyophilized form. Very promising application at industrial level is coming up.

- Strategies for reduction and substitution of salt content of dry-cured hams (bone-in-hams and boned hams) available for producers IRTA (SP)
  - The results and new findings about dry-cured hams with salt content reduction process were presented to industry in a double demonstration session held in Monells (Girona, Spain), one in English and the other in Spanish (Deliverables D6.1.8-2 and D6.1.10-2). Industrial producers can integrate these results and findings to define their proper strategy
  - regarding reduction and substitution matters.
- Automatic equipment for on-line measurement of pH and weight at industrial conditions for raw material classification in order to avoid soft texture problems in dry-cured hams, especially in the case of a reduction in the salt content IRTA (SP), ACTIA (ADIV) (FR)

pH is a feasible parameter for the raw material selection in dry-cured ham production. Extending post-salting period does not improve texture in the final product but ensure the microbiological stability of hams during processing.

**Computed tomography** is a non destructive and useful technique for estimating water activity as well as salt content in the most critical area of hams and monitoring these parameters throughout the elaboration process. The duration of post-salting periods depends on the raw material characteristics (fat and water contents) therefore the time should be adapted for each class of hams.

- High Pressure Process (HPP) service available for the texture improvement in dry-cured meat products with reduced salt content IRTA (SP)
  - The application of high pressure on the final product has positive effects on the quality of dry-cured hams from the microbiological and texture points of view. However, when the water content is high, sensory attributes can change negatively. Extending drying solved this negative effect. Processing parameters in high pressure treatment should also be adjusted for each product.
- <u>Use of Sym'Previus modelling tool to follow bacterial evolution as a function of storage</u> and distribution temperature monitoring for European meat producers – ACTIA (ADRIA) (FR).

In total three meat products and three temperature conditions of storage have been studied in order to confront bacterial kinetics obtained in challenge test, *i.e.* artificially contaminated food, and software simulation... Fluctuating conditions of storage have been tested for sausage meat, sausage and reconstituted meat in static and dynamic temperature conditions of storage. Results show good agreement between simulation and experimental counts obtained for in mass artificially contaminated *Leuconostoc mesenteroides*, which could represent major lactic acid microbial population naturally found at 4 to 8 log CFU/g in meat based products as well as artificial contamination of pathogenic *L. monocytogenes*, found in contamination level below 2 log CFU/g.

Sym'Previus successfully takes into account food matrix and the impact of dynamic conditions of storage on pathogen growth simulation for real time temperature recordings which constitute a relevant decision making tool to determine and validate food shelf-life complying with the EC regulation No 2073/2005 on microbial criteria for foodstuff.

#### Other sectors

A predictive model available for managing shelf life and safety of green olives, based on the performance of lactic acid bacteria and yeasts during fermentation process – ETAT (GR)

Prediction performance of the model set up and tested for lactic acid bacteria and yeasts behaviour during fermentation process of green olives was very acceptable. An extension of the predictive model to others varieties is planned.

# WP7 ENVIRONMENTAL, SOCIETAL, HUMAN AND ECONOMIC IMPACTS OF INNOVATION

The main strategic objectives of WP7 were:

- (i) Identification of patterns of individual and collective innovation processes in the TFP industry, in background of the criteria of geographic protection and management of local heritages;
- (ii) Identification of critical control points for environmental pollution in existing TFPs production and processing and development of strategies to minimise the impact of new/innovative technologies on the environment;
- (iii) Evaluation of the effects of specific nutrient composition changes in TFPs on physiological parameters, selected as biomarkers of risk for chronic degenerative diseases;
- (iv) Development of standardised, structured screening tools in order to provide data for a quantitative analysis of social and cultural differences among participants in relation to TFPs in the different European Countries;
- (v) Dissemination of information concerning the health benefits of TFPs to the food industry, consumer organisations, organisations devoted to the interests of affected (diabetes, hypertension, etc.) population groups and health professionals in Europe;
- (vi) Analysis of the practical handling of innovations in TFPs and their impacts in SMEs and elaboration of conclusions and recommendations to better introduce and link innovative activities in SME-size TFP producing companies.

Partners involved: INRAN\* (Italy), INRA (France), UL (Slovenia), FW (Germany)

#### METHODOLOGIES & APPROACHES EMPLOYED

The activity of this WP is heterogeneous and different aspects have been covered namely social, environmental, economic and health.

The social aspect, i.e. the territorial impacts of traditional foods products (TFPs), has been evaluated considering the territory as complex result and social build in relation to global economic. The research methodology applied was based on the history, territorial anchorage, local economic impact of TFPs and the application of a questionnaire administered to producers. It also consists of interviews with individuals in charge for the local organization of the producers, technicians of the local committees of quality, farm producers and managers, and by talks with stakeholders.

The environmental impact has been evaluated by multi-approach methodologies. Concerning agri-environmental many different indicators have been used. The oversight on pollution critical stages arising from the innovation studied was carried out from the model scope of environmental impact indicators such as greenhouse gas emissions, energy usage, resource input, while the estimation of toxicological effects of organic pollutants by specific models. Finally, for the evaluation of environment, amongst the inspected environmental impacts method, the procedural principles of Life cycle assessment (LCA) were found to be the most suitable for the assessment of environmental impacts of the production line innovations studied. LCA method offers high flexibility as the emission modelling approaches can be set to the desired detail.

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<sup>\*</sup> WP leader

The evaluation of the economic impacts on innovation of TFPs was carried out by a literature review along with a questionnaire containing questions regarding the situation of innovations as well as questions dealing with success and failure of innovations, which was administered to food companies. Moreover, it has been made a phone-based interview.

The relationships among TFP and health impacts have been evaluated through the use of indirect and direct markers: among the indirect markers, food records and 24 hours recalls for the assessment of the compliance with diet on the basis the recommendations provided; among the direct ones, anthropometric indicators (weight and height) and biochemical markers specific for each study such as clinical markers, biomarkers of antioxidant status and of oxidative stress. The main aim was to identify the food target molecule in the blood.

#### ACHIEVEMENTS OF THE WP TO THE STATE-OF-THE-ART

Consumer's health is influenced by various factors related to the production system and the marketing of food products. Agricultural methods of production on the one hand, and industrial food processing along with the structure of distribution chain on the other hand, contribute to assign intrinsic properties to food products. From the consumer perspectives these attributed qualities concur to the acceptability of the products in terms of cost, status symbol, availability and trend patterns. Consumer choice is as well determined by economic and socio-psychological aspects based on the consumer previous experiences and preferences. Thus, the marketing structure and the production system have an explicit impact on the consumer choice and, as a immediate consequence, on the consumer health. In addition, as know traditional foods are linked with geography, as traditional foods in southern European regions belonging to Mediterranean diet. Biochemical, clinical and epidemiological research during the last 25 years has provided solid foundation for the health benefits of the Mediterranean diet but today its future is uncertain.

The consumption of TFPs carries cultural significance, provides the right balance between agricultural production, environment, sustainability and food security since traditional agricultural practices are family heritage and reflect pedoclimatic conditions which are typical expression of the local area. Purchasing traditional food contributes to community economic development; family farmers directly linked to a local market are more likely to survive in today's competitive global agriculture market. Thus the consumption of TFPs links farmers and consumers, creating jobs and reducing the environmental impact of long distance food transport. Four different aspects of innovation in TFPs have been explored: social, environmental, economic and health. With reference to the strategy and innovation trajectory for traditional products, the objective was the identification of patterns of individual and collective innovation processes in the TFP sector, in background of the management of local heritages and the governance of common pool resources. Traditional products belonging to different agro-food chains were studied: Corsican Clementine, Corsican pork meat, Corsican Brocciu, Tuscany pork meat and Savoyard Cheese.

Innovation for traditional food is opening an interesting approach if not limited to process innovation. By this way, such approach implies a more realistic definition of traditional food and puts in the view the legitimacy of the innovation of TFPs.

Since traditional foods find their uniqueness in the capacity of satisfying not only physiological needs but primarily to perpetuate a knowledge that consumers recognize, the implemented innovations should support the creation of new links between traditional foods and meet the expectations of new generations of consumers. Legitimacy of innovation of TFPs is thus seen as the capacity to meet consumers expectations.

Small and medium enterprises (SMEs) are particularly involved in the process of innovation at different levels. Fostering the analysis on organizational innovation and on the effectiveness of territorial linkage, it is possible to underline the raw material importance; SME are called to

develop innovation practices within a perspective of preservation and consolidation. Indeed, the preservation of raw materials, based on locally available resources, and the consolidation of processing know-how, that reflects long-established and recognized characteristics of the product, are crucial steps to achieve the legitimacy of the innovation. At the same time, SMEs involved in the similar TFPs sectors should coordinate their efforts, avoiding to act in an isolated way. Horizontal coordination can promote a faster and more effective up-scaling of the production of traditional foods, facilitating a peer-to-peer knowledge sharing and supporting the regulation of tensions. The innovation path reflects as well the relation to the market based on the confidence. The confidence, if supported by guarantees associated with the offer of traditional food (such as technical rules, certification assessment), suggests a view on the innovations which denote traditional food and represents an added value on the market. Confidence is also related to the ability of the customer/costumer, to recognize the sensory and symbolic messages intrinsic in traditional food. In view of this, SMEs should promote specific training to make possible the appreciation of traditional food seen as strategic competences. Transmission of knowledge can be identified as a inter-generational contact and thus is key for the development of the legitimacy of the innovation.

Traditional foods, defined as a common heritage, represent a collective resource whose management concerns the public authority; the process of innovation must be coherently integrated in a the political framework that takes into account consumer expectations supposed to be satisfied in terms of construction of collective identity along with the promotion of a sustainable development.

In conclusion the TFPs are products able to enhance the traditions, culture and the knowledge of a community; TFPs' properties are the expression of a particular territory; TFPs represent a coherent economical coordination and cultural, social and professional identities. The price premium of TFP can be based on a twisted image or a way to remunerate environmental and cultural services.

The second approach consisted in the environmental impact of innovations for TFPs; the activity has been carried out by the University of Ljubljana, Slovenia. The objective was the detection and the assessment of possible new environmental pollution points and their extents or possible environmental pollution reductions in new/innovative TFPs production and processing. Four model TFPs have been selected: cheese from raw milk, hard cooked cheese; dry-cured ham; beer and cauliflower. In the first stage, the conceptual models of the model TFPs production lines were constructed in conjunction with TRUEFOOD partners; specific field experts, research organizations and the representatives of the food industry.

Thereupon, the raw production data obtained from the TRUEFOOD partners was linked with relevant databases to obtain an emission inventory. In the next stage, the contribution of the accounted emissions to the individual environmental impact categories was calculated.

In summary, the results obtained showed a lower potential environmental impact (EI) of the sequential ventilation due to the reduction of electricity consumption (ripening room ventilation in hard cooked cheese production line), increased potential resources consumption and reduced global warming potential of oil supplementation (vegetable oil supplementation in dairy and hard cooked cheese production line), reduced potential EI for low milk yield heard / day lower potential EI for higher milk yield / kg milk (once daily milking), slight increase in the EI potential (potassium lactate addition in dry cured ham production line), higher eutrophication, acidification potential but lower global warming potential (fertility management: organic fertilizer in *Brassica* cultivation), increased EI due to implementation of packaging of cheeses.

Yet, such calculations and environmental impact reduction actions should be perceived from a broader perspective. In the case of packaging, for example, the implementation of the packaging system accounts for higher EI potential in comparison to the unpackaged foods. Nevertheless, the packaging implementation is a necessity in regard to the consumer and food safety issues, and the compensation of the EIs has to be mitigated. To respect this point of view and the

demand for sustainable development, the implemented packaging has to bare low potential EI. Further on, the consumer contribution to waste separation and the waste management legislation and implementation mechanisms should assure further EI reduction through the recycling of packaging.

Further on, the effect of vegetable oil supplementation and milking frequency modification on the dietary value of milk and dairy products was not statistically significant, therefore the implementation of these innovations with respect to the higher environmental impact potentials assessed is unjustified.

Also, the results of the fertilizing treatments confirm the existent agricultural Best Available Practices guidelines (time of fertilizing, housing, removal, storage, application and integration of organic fertilizers ...).

In conclusion, the results obtained showed the possible use of such indicators for the monitoring of environmental impacts of agricultural production and food processing systems. This offers the opportunity to identify specific steps of production with high environmental impacts, in order to perform corrective actions to improve the link between production and environment.

The third way was micro-economic impact of innovation for TFPs. Food manufacturing and industry also play a crucial role in the promotion of TFPs, given the fact that it has a direct impact on the macro-level environments which results in a trickle down effect on the physical environment, the social environment and thus influencing the individual factors such as consumers choices. For this reason the industrial sector should be more involved in terms of investments into the TFPs and adoption of marketing policies to promote TFPs.

The main purpose of this research activity was to analyse the practical handling of innovations in TFPs and their economic impacts in SMEs and thus to elaborate conclusions and recommendations to better introduce and link innovative activities to this group of companies. First of all a comprehensive literature review regarding the topic of innovations in the food industry was carried out in order to provide a theoretical and factual basis for the empirical studies planned in this project. Special emphasis was laid on the factors which impact the success of innovations. The results of the literature study show that "situation and perspective of the market", "enterprise form and size", "market research and marketing", "innovation management (including co-operations with external partners)" and "product characteristics" are essential for the innovation success.

In a second step, a written company survey was carried out in Germany, Italy, the United Kingdom, Austria and Poland. The questionnaire was elaborated on the basis of the literature study and therefore dealt with general information about the company, questions regarding the situation of innovation, co-operation behaviour of companies and information about costs and turnover regarding innovations. Furthermore, it has been asked to what extent companies apply factors which yield to innovation success. Altogether 390 utilizable questionnaires were returned. In order to countercheck the results of this analysis, 20 guideline-based telephone interviews with representatives of different companies of the beverages industry, the dairy industry and companies producing fruit and vegetables or meat in Germany, Italy and the United Kingdom were additionally carried out using similar questions as in the written company survey. With respect to the effects of product innovations results of the case studies show that new markets could be opened up due to the realisation of new product innovations by enlarging the customer-base. Furthermore, in some cases it was possible to increase the market share. However, there are also some internal and external barriers which make it difficult for companies to be innovative. Internal problems mainly refer to lack of personnel and financial resources as well as organisational problems (e.g. in innovation management) while external barriers are mainly based on not very transparent, equivocal and fast changing regulations (mainly at EU level) which make it difficult for SMEs to follow the current status of legislation. This is an aspect which impedes product innovations in particular in knowledge-intensive areas of the food industry. Not least against the political will to lower bureaucracy in particular for SMEs activities on a EU and national level should be enhanced which aim to harmonize regulations between different areas of policy as well as to lower the requirements for SMEs.

Scientific literature indicates that co-operation with external partners is an important field to improve the innovation activities in the food industry. One third of the interviewees during the case studies stated that they do not co-operate with partners in innovation activities because they are able to accomplish all tasks accruing within the innovation process without any external support. However, two third of interviewed companies indicated that it is hardly possible to do innovations without the support of external partners. Between 40 % and 60 % of the companies questioned during the written survey already co-operate with external partners. These SMEs mainly work together with suppliers. Nevertheless, there seems to be room for improvement regarding the co-operation with external partners in particular from academia, food retailers or private customers which are so far under-proportionally involved in innovation activities of food SMEs.

Regarding several success factors it can be stated that the fields "product characteristics" and "marketing expertise of employees" are already realised by a rather high part of SMEs. However, there is substantial room for improvement in the fields "market research of companies" and "innovation management", mainly regarding personnel issues (e.g. only low funds are provided to employees for innovation projects, lack of close co-operation between different departments). Both areas are mainly influenced by internal decisions of the respective food industry companies and thus can be more independently changed than e.g. the character of a specific market.

Finally the link between TFP and healthy status has been analyzed with the overall aim of evaluating the effects of specific nutrient composition changes in TFPs on physiological parameters, selected as biomarkers of risk for chronic degenerative diseases. The activity was carried out by four in vivo studies (three dose/response and one crossover studies) on TFPs (strawberries), products obtained by innovative technological processes (jam from organic strawberries) or by change in animal feeding regimen (cheese) or by modification of the normal processes (beer), namely Bioavailability, Metabolic action and Functionality trial.

Bioavailability trial (strawberries): the aim was to evaluate the effect of acute consumption of fresh and stored strawberries on red-ox status in humans. Before starting the in vivo study, selection of type of strawberries has been conducted on different agricultural ecotypes of strawberries: Wild strawberry "Aprìca" (Lombardia, North Italy), Strawberry "Favetta di Terracina" (Lazio, Centre Italy), Strawberry "Mara des Bois" (Calabria, South Italy), Commercial strawberry (imported from Spain) and available on market place. The influence of cultivar, storage and modified atmosphere packaging is widely reported in literature, on the contrary domestic storage is scarcely treated. Results showed that typical strawberries have higher nutritional values than the equivalent commercial foods, with an increased effect to be observed after consumption of fresh rather than stored food; meaning that the body has a greater defence against attacks by radical forms harmful to human health. The use of typical organic fruits demonstrated that food quality is important not only considering the safety aspects but also the nutritional ones. It is well known that without using pesticides, the production of bioactive compounds in plant can be enhanced, in particular for vitamins and polyphenols with antioxidant activity which are useful for the maintenance of the health status. In conclusion, the consumption of fresh local fruits increases the antioxidant status and decreases the oxidative stress, hence exerting a prevention action on chronic diseases and an improvement of the health status.

Metabolic action trial (strawberry jam): the aim was to evaluate the impact of consumption of strawberry jam sweetened with wild apple juice and with a sugar content only coming from fruit on glycaemic status in two vulnerable groups of volunteers: the first groups in obese non diabetic volunteers, the second groups in type 2 diabetic obese volunteers. The strawberry jam was

sweetened only with wild apple juice, having a sugar content coming from fruit (mainly fructose) and without any added sugars; a strawberry jam sweetened with sucrose was used as control. The state of the art show that diet or food with high glycaemic impact have been postulated to increase the risk of obesity, insulin resistance, diabetes and cardiovascular disease. A reduction in the glycaemic impact of diet or food is reported in literature data using artificial sweeteners or sugar substitutes. Our results showed that, in both types of volunteers consuming the naturally sweetened strawberry jam, the increase of plasma levels of glucose and insulin is significantly lower compared to consumption of conventional jam. Improving traditional processes to obtain modified products could be a strategy to enhance the quality of life of diabetics helping them with a better compliance to a dietary regimen including highly accepted food. Moreover, it could be established a better cooperation between research and industry with the final message directed to both consumers and Health Care Ministry in order to develop and implement public awareness and primary prevention programmes, targeting the population as a whole, as well as individuals at a higher risk of developing diabetes and to promote healthy diet and physical activity as key elements of a healthy lifestyle, with the end point to hinder the dramatic rise in the costs for health and medical care caused by this pathology.

Functionality trial (cheese): the aim was to investigate the modifications induced on blood lipid profile and antioxidant status of selected healthy volunteers following the ingestion of a low saturated fatty acids or a control hard cheese of raw cow milk. The two types of cheese were obtained only with different feeding of cows: cows were fed a maize silage based diet with (modified) or without (control) linseed oil added. The results showed that supplementation, following a recommended dietary regimen, lead up to an increase of plasma vitamin E and vitamin C, which are powerful antioxidants, in volunteers consuming low saturated fat cheese and to any change in markers involved in cardiovascular diseases, except for myristic acid and oxidated LDL which in volunteers consuming control cheese, increased, while in subjects with low saturated fat cheese decreased. These results are in agreement with literature data and confirm that the improvement of the ratio PUFA/SFA has an important role in the prevention of degenerative disease. In conclusion, dietary fat may influence the risk of coronary heart disease by several mechanism i.e one such mechanism is the effect of dietary fat on the susceptibility of LDL oxidation and in consideration of the fact that myristic acid is one of the fatty acids mostly correlated with increased atherogenic risk, we could assess that changing lipid profile of dairy products maintaining as much as possible their characteristics could be an area of interest in terms of potential functionality of these foods.

Biochemical action trial (beer): the aim was to examine the effect on humans of concomitant consumption of alcoholic or non alcoholic beer and lettuce, studying plasma antioxidant levels and total antioxidant capacity in humans as indicators of antioxidant status. Results show that plasma antioxidant status of volunteers was different after the administration of both the alcoholic treatments and the non alcoholic one, while single plasma antioxidants (liposoluble provitamins and vitamins, vitamin C, thiol groups) did not change after beer administration; moreover, beer phenolic compounds were bioavailable with some differences between alcoholic or non alcoholic beer, corresponding to different bioavailability in humans. Moreover, lettuce phenolic compounds are bioavailable, although the association between beer and lettuce did not imply a higher effect. These results allow to conclude that bioavailability of antioxidant compounds depends on bioactive compounds content, on technological process and on the nature of the meal in which the target food or beverage is consumed. In addition, it is important to underline that even if the percentage of alcohol in beer is lower than the other alcoholic beverages, such as wine, spirits and liquors, beer has to be consumed in moderate quantities, as suggested by dietary guidelines.

#### IMPACT OF THE WP ON ITS INDUSTRY OR RESEARCH SECTOR

Main results obtained by WP7 in the industry or research sector as well as for food policies, represent scientific validation of the added-value of traditional foods linked with the territory, environment, economic and social contexts. In addition, the link between TFPs and health provides much basic information on bioavailability, metabolism, biomarkers of intake and effects on health status. WP7 activities led to the following specific outcomes:

- Regarding social aspects, innovation of TFPs aims to mobilize, respect and reinforce the own competency of each stakeholder such as large medium and small industries, farmers and consumers. Innovation can tailor TFPs to the expectations of new generations of consumers; SMEs operators should preserve the use of raw materials and related processing know-how; In the short and medium terms, such option is able to strengthen the local economical networks, facilitate the technical innovations and fit the consumer expectations according to food availability, diversity and trueness. In a long term perspective, this option is opening ecological intensification perspectives for renewing conception of relevant innovations.
- The impact of innovation of traditional foods on environment shows main results in: 1) the reduction of environmental burden and optimization of resource use (material and energy inputs reduction); 2) in better marketing position resulting from an environmentally balanced production; 3) additional products (e.g. whey cheese), higher aesthetic and quality value of the primary production environment; 4) a decision support tool that allows the selection of alternatives taking into account the ecologic and economic point of view. Consumers choices might thus be oriented towards "environmentally friendly" products.
- The literature analysis identified that the expenditures for innovation activities and for R&D are quite low in food industry and that information exchange between actors involved in the innovation process is very important for the success of innovations. On the other hand, a lack of adequate funding, qualified personnel and market information has been identified. The main results obtained by the survey and interviews support many of the success factors identified in literature: the relevant success factors in the fields of "product" and "marketing" are already implemented in many companies and the room for improvement particularly exists in the fields of "staff" and "market research". The main barriers of innovations are represented by not transparent and equivocal regulations of the EU-legislation and lack of financial and personnel resources. Due to the results small and medium sized enterprises of the traditional food sector can be informed which factors can impact the success of innovation in a positive way. If these factors are realized, the success rate of innovations can be enhanced. As mentioned before, the success of innovations is quite important for the competitiveness of food industry companies. So the results can be helpful to confirm the positioning of SMEs on the market.
- The link of TFPs and health status focussed on bioavailability of bioactive molecules and antioxidant activity as protective factors for health. The focal points of our results are: 1) fresh fruit: uptake and distribution in the body depend on quality, type of cultivar and post-harvest treatments; 2) cheese: as lipid profile, LDL-cholesterol oxidation and cumulative oxidative damage to DNA can be a major causative factor for degenerative disease, our results show that fat quality and not quantity is important. Indeed, the new directive from EU (CE 116/2010) stated that type of the fat indication has to be reported in the label; 3) the impact of technology on concentration of bioactive molecule and bioavailability for beer and the importance of the nature of carbohydrates for jam.

In conclusion, TRUEFOOD study's outcomes provide evidence-based support to promote the production and the appropriate consumption of healthier traditional foods; hence our discoveries could be translated into applications for a sustainable and valuable improvements of Europe's food-related industries and businesses, as well as consumer protection policies. Finally, results obtained within food and health aim at supporting the EU commitment of taking the implications for health into account in all its policies.

## WP 8 TRAINING, DISSEMINATION AND TECHNOLOGY TRANSFER

The main objective of WP8 has been to put in place a system of continuous training and dissemination, capable of effective transfer of new knowledge to the SMEs involved in the production of traditional food. It focused on training, knowledge transfer, dissemination and communication and has taken into account scientific results, which do not needed more demonstration actions (R&D), as well as new knowledge on food innovation issues, standards and legislation at EC, health and nutritional claims, etc. The specific objectives of WP8 have been:

- to establish a structured link between science and industry through the creation of permanent Training and Dissemination Units (TDUs) in 11 European National Food and Drink Federations SPES members;
- to enhance the capacity of the TDUs to dialogue and interchange with science and to reach SMEs;
- to make project results available for as numerous stakeholders as possible (about 3.500 SMEs plus consumer associations, policy makers and other researchers outside the project in the 11 target countries and at EU level) by adopting several target-oriented strategies and implementing specific tools for dissemination and exploitation.

#### METHODOLOGIES EMPLOYED AND MAIN ACHIEVEMENTS

WP8 has been divided in 3 main tasks:

- Establishment of TDUs and training of TDUs staff (task 8.1)
- Exploitation of results and training of SMEs (task 8.2)
- Communication of results to the wider public (task 8.3)

SPES National Federations and research partners successfully implemented the activities foreseen in the work plan. A large number of training, dissemination and communication events were organized in all the countries addressed by the project and these activities led to relevant results.

## Task 8.1 Establishment of Training and Dissemination Units (TDUs) (month 1-36) Subtask 8.1.1 TDU staffing (months 1-5)

At the beginning of the project the successful selection of Techno-Scientific Mediators (TSMs) led to the establishment of 11 Training and Dissemination Units (TDUs) at the European Food and Drink National Federations members of SPES GEIE: TDU Federalimentare (Italy), TDU ANIA (France), TDU FEVIA (Belgium), TDU FFDI (Czech Republic), TDU FHFI (Hungary), TDU FIAA/LVA (Austria), TDU FIAB (Spain), TDU FIPA (Portugal), TDU SETBIR (Turkey), TDU SEVT (Greece) and TDU FI (Denmark). The 11 TDUs are composed of a dynamic and committed group of professionals, with substantial experience in the food and drink industry. Each TDU is sets out by 1 or 2 Techno-Scientific Mediators (TSM). In some cases a TSM collaborator supports them. Women participation was highly encouraged.

#### Subtask 8.1.2 Training of TSM (months 2 – 18)

The aim of the TDUs is to ensure a structured link between research and industry. In order to enhance the capacity of the TDUs to dialogue and interchange with science and to reach SMEs, the appointed group of TSM was trained. The training programme was drafted on the basis of their training needs (following a training needs assessment) and benefiting from competencies available from project partners (centres of excellences and universities). It covered a wide-

spectrum of topics (i.e., food safety and quality, innovation on traditional food products, legislation aspects, technology transfer to SMEs, etc.). In total 12 common training courses and 6 visits to factories and research centres were implemented in Italy, Portugal, Spain, Turkey, Hungary and France.

The training was completed successfully. The final evaluation revealed that the training programme was in line with TSMs needs and priorities, with a high level of involvement and long-term and sustainable benefits for the TDUs from SPES National Federations. TDUs capacity to assist the transfer of knowledge to SMEs was enhanced and their level of knowledge in food safety and quality aspects reinforced. The expected results were achieved at a reasonable cost and the quality of the training activities was very high. Furthermore, the programme was a significant cross-cultural learning experience. Thanks to the training activities of TRUEFOOD a strong network of TSM in 11 different countries was built. The high level of exchange of knowledge and experiences among TSMs was an important European added value of the training courses. The strong network was maintained during the whole project to allow the exchange of views and information on how to use the research results of the project for the benefits of the SMEs and for the organization of effective training and transfer activities to the food and drink industry.

#### Task 8.2 Exploitation of results and training (months 14 – 48) Subtask 8.2.1 Training to SMEs (months 14 – 48)

After selection and training of a TSMs group, WP8 successfully transferred and disseminated a wide range of information, data and new knowledge to SMEs and food producers, mainly through training events (workshops, seminars, etc.), but also through other tools (meetings with SMEs and branch associations, meetings with stakeholders, personnel visits, preparation and dissemination of abstracts from scientific articles and relevant information in an "easy-to-read" format, direct e-mailing of INFO SHEETs containing information of projects' research results etc.). TSMs from TDUs and research partners implemented the activities in 15 countries to ensure a large dissemination and exploitation of results in France, Italy, Belgium, Greece, Spain, Portugal, Denmark, Czech Republic, Hungary, Austria, Turkey, Germany, Poland, Slovenia and Great Britain.

The wide and decentralized approach adopted by the TSMs ensured an extensive participation of SMEs. The project saw a very high level of involvement among SMEs: <u>approximately 23.500</u> SMEs and food producers in 15 countries were directly addressed by the project activities.

In total the project organized 233 training events reaching about 6.226 SMEs and food producers. These training and dissemination activities to SMEs covered a wide range of topics focusing on the project research results, but also on the state of the art of international research regarding the food sector, on the evolving standards and legislation at EC and national level, on the recent developments on health and nutritional claims, etc. TSMs took into account the SMEs'

needs and developed training programmes at national level transferring new knowledge and addressing eventual SMEs' specific requests. The majority of training events were evaluated through questionnaires. The analysis of the questionnaires revealed that overall the participants rated the seminars very positively and indicated that their expectations were highly fulfilled.

Besides the training events, the development and dissemination of INFO SHEETs was an important activity carried out by all TDUs in strong cooperation with the research partners, mainly WP Leaders. In total about 66 INFO SHEETs were prepared in English language, translated in different SPES national languages and disseminated using different dissemination and information channels (i.e., website, newsletter, Trainings etc.). Furthermore, a



specific translation of the main conclusions of these documents was achieved. This information was presented in small articles published in TDUs newsletters or disseminated by emailing. The companies are welcoming these very simple documents that help them understand how TRUEFOOD results can be applicable to their activities.

The booklet "Guidelines on effective technology transfer activities to SMEs in the food sector with particular focus to traditional food manufacturers" was developed with the aim to provide guidance to all the personnel involved in the process of technology transfer to food businesses including mediators, between the industry and the research community, technology transfer staff of the research organisations and the universities and also those researchers, who want to foster the implementation of their research results in food businesses. Since SMEs have several additional barriers to technology transfer compared to large companies in this document specific attention is being paid to the aspects of the SMEs. The guideline was printed and distributed on the Stakeholders Meeting of the ETP Food for Life on 3<sup>rd</sup> March 2010 in Brussels (ca. 200 participants) and on the TRUEFOOD final conference on 13<sup>th</sup> April 2010 (ca. 160 participants) in Brussels. Furthermore, it was distributed at the conference organized by the University of Milan in March 2010, the food exhibition "Alimentaria" in Spain in March 2010, and the Final TRUEFOOD Conference in April 2010. All SPES members at national level disseminated the electronic version of the document.

#### Task 8.3 Communication and dissemination of results (months 3 – 48)

A TRUEFOOD information and communication strategy was designed at the beginning of the project in order to enhance communication between project partners and to make the project known to the SMEs, the general public and consumers. At the beginning an address list / network of links to EU and national dissemination & information channel was developed with 15.968 contacts and covering more than 20 countries. In particular the following subtask were implemented during the project:

#### Subtask 8.3.1 Design and establishment of the project web site (months 4 – 48)

SPES in cooperation with project partners designed and established a website for the TRUEFOOD programme at the link <a href="www.truefood.eu">www.truefood.eu</a>. The web site is in English and contains almost all the information generated by the project and allows communication between all partners.

#### Subtask 8.3.2 Conferences and workshops (months 17 – 48)

The main events were the TRUEFOOD conferences organized by SPES in cooperation with project partners: "TRUEFOOD For Life" was held in October 2008 in Paris (France) at SIAL international food exhibition. The international conference presented the First research results to boost innovation in the traditional food industry sector. The final TRUEFOOD international



conference "New Roots for Traditional European Foods – Possibilities for success and sustainability" took place in April in Brussels (Belgium) at the Bibliothèque Solvay. The final event presented the main results achieved by all project WPs. More than 175 people registered to this event. Furthermore, a final conference at national level was organized in April 2010 in Budapest (Hungary) on the results of the TRUEFOOD project, with particular focus on WP3, WP5, WP8 and WP1. About 70 people participated in this final event mostly SMEs representatives, but also consumers, ministries, authorities, universities, research institutes were represented. The conference was chaired by the highest-ranking officer at the Ministry of Agriculture and Rural Development dealing with the food industry.

In addition, a national Workshop was held on March 2010 at the Faculty of Agriculture of University of Milan (Italy) with the topic "The market of traditional food products and the healthy needs: what are the possible innovations?" This workshop has been addressed to SMEs and academic people in order to disseminate the results of the TRUEFOOD project at national level. Some topics were: consumer preferences, nutritional and health claims, marketing management, and the general situation of food market. The workshop had an audience of about 170 people.

#### Subtask 8.3.3 Other communication and dissemination activities (months 3 – 48)

This subtask brought as an important result the on-line TRUEFOOD library <a href="http://www.truefood.eu/libraries.asp">http://www.truefood.eu/libraries.asp</a> that contains all information materials produced within the project (i.e., articles, abstracts on scientific publications, posters, press releases, etc.) At the end of the project the library counts with 325 items.

National web pages were published on the SPES Federations / TDUs websites in the following national languages: Italian, Flemish, Czech, Hungarian, Danish, Spanish, Portuguese, German, Greek, Turkish and French. The web pages are an important tool for the visibility of the project and for the communication and dissemination of project results at national level. All national web pages will continue to be on-line after the end of the project.

The website "TRUEFISH" http://www.truefish.eu/ designed and maintained by KTU was created to help seafood processing companies (SMEs) that are producing traditional fish products such as salted, smoked, marinated, dried and fermented products in order to identify seafood safety hazards in their production system. Its aim to help such companies to prepare their HACCP plans for their production line.

Information material was published and distributed at national and European level by SPES and CIAA: brochure, bookmark, newsletter TRUEFOOD Info (from nr 1 to nr 8), press releases and articles.

SPES produced a video for TRUEFOOD in different languages (English, Italian, Greek, French) that were presented during relevant events (General Assemblies, conferences, etc.) contributing to increase the visibility of the project.

Info-days targeting consumers were organized at SPES countries. The TROPHELIA student prize aiming at encouraging students to make innovation in traditional food production took place in SPES countries. The winner of the national competitions will partecipate to TROPHELIA Europe, which will be held in Paris in October 2010 during SIAL exhibition. Furthermore, project partners contributed actively to the visibility of the project objectives and results taking part in conferences, meetings, TV and radio interviews, food exhibitions and other events for communication and dissemination of project objectives and results. In total, project partners took part in ca. 680 events. The communication officer archived in a "Dissemination table" all registered communication and dissemination activities.

#### IMPACT OF THE WP ON ITS INDUSTRY OR RESEARCH SECTOR

A number of elements are identified that may provide long-term sustainability to the project activities and contribute to achieve a tangible impact on the industry and research sectors:

- A core group of ca. 20 TSMs will continue to work after the end of the project and assist effectively food SMEs in 11 countries, thus strengthening the long-term impact;
- A strong network of TDUs TSMs is on place;
- A stable network between TDUs TSMs and SMEs in on place (about 3.500 SMEs are part of a stable network);
- Strong interaction among TSMs, research partners and SMEs is leading to new ways of cooperation as a follow up of TRUEFOOD events (i.e., new R&D projects involving SMEs);

- New tools for technology and knowledge transfer are available (i.e., Guidelines for the design and delivery of training activities to SMEs, Evaluation model for SMEs training, Best practice guide for technology transfer to food SMEs);
- Training materials available for further use in different languages;
- INFO SHEETs with main information in research results available in different languages;
- A TRUEFOOD library containing 325 items is on-line for available use;
- A project TRUEFOOD website and national web pages for communication of projet research results and new knowledge on food innovation are on-line for further use;
- A project website TRUEFISH is on-line for supporting seafood processing SMEs to identify seafood safety hazards in their production system.

#### 2. DISSEMINATION AND ITS USE

Planned/actual	Knowledge – YEAR 2007.	Type of audience	Countries	Size of	Partner responsible
Dates	Type	Type of addressee	addressed	audience	/involved
2007/2008	Press release(publication – TRF project's promo event)	General public, Higher education, Industry (all kind of sector), Research (all kind of sector)	Czech Republic	5.000	SPES/FFDI
2007/2008	Press release(publication – TRF project's promo event)	General public, Higher education, Industry (all kind of sector), Research (all kind of sector)	Czech Republic	7.000	SPES/FFDI
2007/2008	Press release(publication – TRF project's promo event)	General public, Higher education, Industry (all kind of sector), Research (all kind of sector)	Czech Republic	5.300	SPES/FFDI
2007/2008	Press release(publication – TRF project's promo event)	Higher education, General Public.	Czech Republic	5.800	SPES/FFDI
2007/2008	TRF project promo	General public,	Czech Republic		SPES/FFDI

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	- website	Higher education, Industry (all kind of sector), Research (all kind of sector)			
2007/2008	TRF project promo - website	,	Italy	5000	SPES/FED
2007/2008	TRF project promo - website		Spain		SPES/FIAB
2007/2008	TRF project promo - website		Portugal		SPES/FIPA
2007/2008	TRF project promo - website		Turkey		SPES/SETBIR
007-2008	Press release	SIAL Paris participants + press	France		SPES/ANIA
2007-2008	Press release (press) San Adrián (Navarra)	Industry	Spain	20	SPES/FIAB
2007-2008	AINIA Technological Centre			20	SPES/FIAD
007-2008	Publications annual report		Greece	1000	SPES/SEVT

Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	(contains an extensive presentation of TRUEFOOD project)				
2007-2008	Networking: INTRAFOOD (Kortrijk)		Belgium,		SPES/FEVIA
2007-2008	Project web-site Uploading of TRUEFOOD newsletters, TRUEFOOD brochure, of the training sessions reports and announcement of the training sessions.	Industry / research / public authorities	Greece		SPES/SEVT
2007-2008	Direct e-mailing Dissemination of TRUEFOOD 2 <sup>nd</sup> and 3 <sup>rd</sup> newsletter	Industry (SEVT members)	Greece	100	SPES/SEVT
2007-2008	5 Articles in SEVT newspaper	Industry, research, public authorities	Greece		SPES/SEVT
2007-2008	TRUEFOOD Info All editions	General Public Industry (all sectors)	Portugal		SPES/FIPA

Dissemination of Knowledge – YEAR 2007/2008							
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved		
2007-2008	Press release (press/radio/TV) 1 Article in the magazine of Food Technologists.	Research General public	Greece		SPES/SEVT		
2007 January 11-14	Exhibition "Flanders Expo Gent" in Ghent, Belgium, where UGENT distributed TRUEFOOD brochures and 'TRUEFOOD Info' newsletters to the conference participants.	Agribusiness sector	Belgium	~ 40	UGENT		
2007 January 25-26	Conference "Mobilité en Europe" in Bordeaux, France where UGENT distributed TRUEFOOD brochures and 'TRUEFOOD Info' newsletters to the participants.	Research	EU countries	~ 40	UGENT		
2007 February 5-6	UGENT	Research	EU countries	~ 50	UGENT		

Dissemination of Kn	owledge – YEAR 2007	/2008			
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	participated at the Conference "Food Quality Certification" in Brussels, Belgium where distributed TRUEFOOD brochures and 'TRUEFOOD Info' newsletters to the				
2007 February 12	participants. Press release(publication – TRF project's promo event)	General public, Higher education, Industry (all kind of sector), Research (all kind of sector)	Czech Republic	4.500	SPES/FFDI
2007 February 15- 17	UGENT participated at the "EAAE-Congress" in Innsbruck, Austria where presented its research findings and participated actively in the conference discussions to gain	Research	EU countries	~ 150	UGENT

Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	insight into the present debates concerning food/network related issues.				
2007 March 20-21	UGENT participated at the "AVA 3" Conference in Debrecen, Hungary, where presented its research findings and participated actively in the conference discussions to gain insight into the present debates concerning food/network	Research	EU countries	~ 150	UGENT
2007 March 29-31	related issues. Conference	Research	Greece Spain		AUA
2007 April 9	Congress Cytalia CompULtense University of Madrid	Research	P	50	SPES/FIAB
2007 April 24-25 2007 May	Conference Direct e-mailing: announcement of	Research Industry (all food sectors)	Hungary Belgium		CCH SPES/FEVIA

Planned/actual		Type of audience	Countries	Size of	Partner responsible
Dates	Type		addressed	audience	/involved
	the TRUEFOOD newsletter n°2				
2007 May	Presentation	Government	Norway	20	MATFORSK
2007 May – 2008 April	Visits: presentation of the TRUEFOOD project	Industry (all food sectors), stakeholders, research centres	Belgium	± 100	SPES/FEVIA
2007 May- October	Publications, Scientific paper "nutrition"	Food reseach, food industry	Austria/Germany	300-500	SPES/FIAA
2007 May –2008 May	Distribution newsletter	All types	Turkey	30	KTU
2007 May 3	TRF project promo  – Media Briefing	General public, Higher education, Industry, Research, journalists	Czech Republic	21	SPES/FFDI
2007 May 9-14	Direct e-mailing: announcement of the TRUEFOOD newsletter n°2	Industry (all food sectors), research centres	Belgium	2400	SPES/FEVIA
2007 May (13.)	Publications	Research	EU	~ 5000	UGENT
	Press release (press)	Industry	Spain		
2007 May 16	Valencia AINIA Technological Centre			10	SPES/FIAB

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	Press release (press)	Industry	Spain		
2007 May 17	AZTI-Tecnalia Technological Centre			20	SPES/FIAB
	Basque Country				
2007 May 17	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector), Research (all kind of sector)	Czech Republic	61	SPES/FFDI
2007 May 17	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	41	SPES/FFDI
2007 May 18	Bilateral meetings Madrid	Industry	Spain	3	SPES/FIAB
2007 May 22	Angulas Aguinaga Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	14	SPES/FFDI
2007 May 24	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector),	Czech Republic, Italy, Belgium, Hungary, Poland, Slovak Republic,	63	SPES/FED

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
		Research (all kind of sector)	Austria		
2007 May 24	Press release (press)	Industry	Spain		SPES/FIAB
2007 May 24	Madrid Recoletos Group			30	SFE3/ITAD
	Conference	Research	Spain		
2007 May 25	Autonomous University of Madrid	Research	Spani	100	SPES/FIAB
	Conference	Research	Spain		
2007 May 29	University of Lérida. ETSIA	Research	Браш	16	SPES/FIAB
	Congress Cytalia		Spain		
2007 May 31	CompULtense University of Madrid	Research	Spani	50	SPES/FIAB
2007 May 31	Conference	Research	EU countries		CCH
2007 June 2007 June	Press release - Conference +	General public Higher	Hungary Hungary	70	SPES/FHFI; CCH SPES/FHFI
November	Flyers	education, Research, Industry	Trungar y	70	51 L5/1 III I
2007 June 4	Conference/Meetin	Higher	Czech Republic	11	SPES/FFDI
	g/TRF project's promo event	education, Industry (all kind			

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 June 5	Press release TRUEFOOD General Assembly	of sector) General public / Specialized press	France	50	SPES/ANIA
	Press release (press)	Industry	Spain		
2007 June 12	AMEC-Association of Media EvaULation Companies Barcelona-			20	SPES/FIAB
2007 June 13	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	19	SPES/FFDI
2007 June 13	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	9	SPES/FFDI
	Dissemination:"Il progetto TRUEFOOD:		Italy		SPES/FED
2007 June 13	innovazioni per le PMI nel settore dei cibi tradizionali" Frosinone	SMEs		5	
2007 June 14	TRF project promo  – Media Briefing	General public, Higher	Czech Republic	25	SPES/FFDI

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 June 19	TRF project promo  – Media Briefing	education, Industry, Research, journalists General public, Higher education, Industry, Research, journalists	Czech Republic	17	SPES/FFDI
2007 June 19	Bilateral meetings Madrid	Research	Spain	2	SPES/FIAB
2007 June 20	TRF project promo  – Media Briefing	General public, Higher education, Industry, Research, journalists	Czech Republic	19	SPES/FFDI
2007 June 22	Media briefing Monells (Gerona)-	Industry, research and higher education	Spain	2	IRTA
2007 June 25	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	6	SPES/FFDI
2007 June 25	TRF project promo  – Media Briefing	General public, Higher education,	Czech Republic	32	SPES/FFDI

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 June 26 2007 July and December 2007 July	Conference/Meetin g/TRF project's promo event  d SPES/ANIA flash newsletter  Publication: "Revista Indústria CIP" Article about TRUEFOOD: Framework and objectives	Industry, Research, journalists Higher education, Industry (all kind of sector) SMEs / Institution / higher education General Public Industry (all sectors)	Czech Republic France Portugal	18 8000	SPES/FFDI  SPES/ANIA  SPES/FIPA
2007 July 2	Bilateral meetings Madrid-	Consulting	Spain	3	SPES/FIAB
2007 July 2	TRF project promo  – Media Briefing	General public, Higher education, Industry, Research, journalists	Czech Republic	41	SPES/FFDI
2007 July 3	Bilateral meetings Madrid	Industry Embutidos Frial	Spain	3	SPES/FIAB

Dissemination of Knowledge – YEAR 2007/2008					
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 July 4	Bilateral meetings Madrid	Research	Spain	3	SPES/FIAB
2007 July 2	Bilateral meetings Barcelona	Research	Spain	3	IRTA
2007 July 7	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	4	SPES/FFDI
2007 July 8-11	Conference	Research	EU countries		AUA
	Press release (press)	Industry	Spain		
2007 July 9	Oviedo FICYT- Foundation for the Development of the Applied Science and the Technology in Asturias			22	SPES/FIAB
2007 July 12	Bilateral meetings (Barcelona)	Industry	Spain	2	SPES/FIAB
2007 July 12	Bilateral meetings (Barcelona)	Industry	Spain	3	SPES/FIAB
2007 July 12	Bilateral meetings (Barcelona)	Industry	Spain	2	SPES/FIAB

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	AMEC-Association of Media EvaULation Companies				
	Press release (press)	Industry	Spain		
2007 July 17	Santiago de Compostela - AINIA Technological Centre			40	SPES/FIAB
2007 July 17	Conference: "The practical application of predictive models of microbiology to support the competitiveness of the Food Industry"	Industry(all sectors) Researchers	Portugal	60/80	ESB
2007 July 19	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	14	SPES/FFDI
2007 July 24	Press release (press)	Industry	Spain	10	SPES/FIAB
	Flour Milling				

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	Madrid Association (AFHSE)				
2007 July 25	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	4	SPES/FFDI
2007 July 31	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	44	SPES/FFDI
007 August	Poster/Conference	Research/Industr y	Eu countries	700	INRA, IRTA, MATFORSK, PEG, SGGW, UGENT
007 August 2007 August	Seminar Press release(publication – TRF project's promo event)	SMEs Higher education, Industry (Bakery industry, Confectionary)	Denmark Czech Republic	20-25 3.200	MATFORSK/FI SPES/FFDI
007 August 13	Announcement of the conference (31/8): distribution of TRUEFOOD brochures and newsletters	Industry (all food sectors), media	Belgium	120	SPES/FEVIA
2007 August 20	Bilateral meetings Industrias Rodriguez Reus (Tarragona)-	Industry	Spain	3	SPES/FIAB

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 August 20	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	19	SPES/FFDI
2007 August 29	E-mailing: announcement of the conference in Fevia-Flash n°25	Industry (all food sectors)	Belgium	2.475	SPES/FEVIA
2007 August 30	Bilateral meetings (Barcelona) ANAFRIC- National	Industry	Spain	3	SPES/FIAB
	Association of Cold Storage and Quartering				
2007 August 31	Conference talk : at Foire de Herve- Battice (Battice)	Industry (all food sectors), research centres, stakeholders, general public	Belgium	± 50	SPES/FEVIA
2007 September	Conference: International Conference of Predictive Modelling (Dissemination)	Research	Greece	250	SPES/ SEVT
2007 September/	Conference	Research	Turkey	50	SPES/SETBIR
December	(Ege	academic			

Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	university/İzmir)	personell			
2007 September/	Conference	Research	Turkey	50	SPES/SETBIR
December	(UULdağ	academic			
2007.0	university/Bursa)	personell	C . 1E .	0.0	CCII
2007 September	CCH participated at the "3rd SNS	Research	Central Eastern	~ 80	ССН
	Congress" in		European Countries		
	Radenci, Slovenia,		Countries		
	where presented its				
	research findings				
	and participated				
	actively in the				
	conference				
	discussions to gain				
	insight into the				
	present debates				
	concerning food/network				
	related issues.				
2007 September 3	Conference/Meetin	Higher	Czech Republic	7	SPES/FFDI
2007 September 5	g/TRF project's	education,	Czech Republic	,	51 L5/11 D1
	promo event	Industry (all kind	nd		
	1	of sector)			
2007 September 5	UGENT	Research	EU countries	~ 30	UGENT
	participated at the				
	"IPSERA				
	Conference" in				
	Wiesbaden,				
	Germany, where				

Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 September 5-8	presented its research findings and participated actively in the conference discussions to gain insight into the present debates concerning food/network related issues. UGENT participated at the "IPSERA Conference" in Wiesbaden, Germany, where presented its research findings and participated actively in the conference discussions to gain insight into the present debates concerning food/network related issues.	Research	EU countries	~ 150	UGENT
2007 September 6	Web Page on the	Industry (all food	Belgium	± 1.000 per	SPES/FEVIA

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	conference talk (31/8) - <u>URL</u> Wallonia	sectors)		month	
	Congress (Santander)	Industry	Spain		
2007 September 12	AESAN- Spanish Agency for Food Safety and Nutrition			40	SPES/FIAB
2007 September 13	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector), Research (all kind of sector)	Czech Republic	71	SPES/FFDI
2007 September 13	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	6	SPES/FFDI
2007 September 13-14	Meeting of European Technology Platform Food for Life.	Higher education	Belgium	100	SPES MEMBERS
2007 September 16-19	(Bruxells) Conference	Research	EU countries		AUA/ADRIA/CCH

Dissemination of Kno	Dissemination of Knowledge – YEAR 2007/2008							
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved			
	Bilateral meetings	Industry	Spain					
	Madrid	maasti y						
2007 September 17	AECOP- Spanish Association for Coaching and Process Consulting			3	SPES/FIAB			
	Annual Assembly	Industry	Spain					
2007 September 20	Madrid ACEX- Spanish Association of	maustry		70	SPES/FIAB			
2007 September 20	Cooperation Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	14	SPES/FFDI			
2007 September 21	Conference of the Slovenian Technology Platform	Food Industry	Slovenia	50	SPES/FIAA			
2007 September 25	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector), Research (all kind of sector)	Slovak Republic, Austria	56	SPES/FFDI			
2007 September 27	Conference"Food – from successful	Research&indust ry	EU countries	170	SPES/FIAA			

Dissemination of Ki	nowledge – YEAR 2007/	2008			
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	ideas to innovative products"				
2007 October 3	Conference Madrid	Research	Spain	20	SPES/FIAB
2007 October 4	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	7	SPES/FFDI
2007 October 5	Press release (press) Le Sillon Belge	Agriculture, general public	Belgium	± 26.000 (paper version) + online (members only)	SPES/FEVIA
2007 October 5	Publication				AUA
2007.0 . 1 . 10	Conference	Industry	Spain		CDEC/ELAD
2007 October 10	Madrid Leche Pascual Group	, and y		70	SPES/FIAB
	Press release (press)	Research	Spain		
2007 October 10	Barcelona Technological Park of Cerdanyola (CataULña)			40	SPES/FIAB
2007 October 17	CIBUS Tech Parma	SMEs	Italy		SPES/FED
2007 October 18	Conference Zaragoza	Higher education	Spain	70	SPES/FIAB

Dissemination of Kno	owledge – YEAR 2007/	/2008			_
Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 October 18-19	Businessmen of Aragón UGENT participated at the "The food economy: Global issues and Challenges" in The Hague, Netherlands, where UGENT distributed TRUEFOOD brochures and "TRUEFOOD Info' newsletters to the	Research	EU	~ 50	UGENT
2007 October 24-25	participants Congress Madrid	Industry, research and higher education	Spain	300	SPES/FIAB
2007 October 25	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	8	SPES/FFDI
2007 October 29	Exhibition Murcia Food	Industry, research and higher education	Spain	100	SPES/FIAB
2007 October 30	Bilateral meetings Madrid	Higher education	Spain	50	SPES/FIAB

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 October 30	Congress Lisbon	Industry, research and higher education	Portugal	200	SPES/ FIPA
2007October 30- November 1°	Exhibition London Food Ingredients Europe (FIE)	Industry, research and higher education	UK	30	SPES FIAB
2007 October 31	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	16	SPES/FFDI
2007 October December	Project website: publications of web pages for FEVIA (in <u>Flemish</u> and in French)	Industry (all food sectors)	EU countries	± 8.500 per month	SPES/FEVIA
2007 October- December	Project website: publications of web pages for Flanders'FOOD (in Flemish)	Industry (all food sectors)	EU countries	± 2.500 per month	SPES/FEVIA
2007 October December	Project website: publications of web pages for WAGRALIM (in French)	Industry (all food sectors)	EU countries	± 2.000 per month	SPES/FEVIA
2007 October- December	Project website : FEVIA (in Flemish and in French)	Industry (all food sectors)	EU countries		SPES/FEVIA

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 October 22	TRF project promo  – Media Briefing	General public, Higher education, Industry, Research, journalists	Czech Republic	30	SPES/FFDI
2007 November	Direct e-mailing: announcement of the TRUEFOOD newsletter n°3	Industry (all food sectors)	Belgium		SPES/FEVIA
2007 November	Direct e-mailing: dissemination of scientific results (translated into French and Flemish)	Industry (all food sectors), stakeholders	Belgium		SPES/FEVIA
2007 November	Exhibition	General public	Hungary	250	SPES/FHFI
	Press release (press)	Industry	Spain	30	
2007 November 6	San Adrián (Navarra)- CNTA- National Centre for Technology and Food Safety				SPES/FIAB
2007 November 7	Distribution of TRUEFOOD brochures and newsletters (50	All types	Belgium	50	SPES/FEVIA

Planned/actual		Type of audience	Countries	Size of	Partner responsible
Dates	Type	J1	addressed	audience	/involved
	sets) at Wagralim site				
2007 November 7	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	14	SPES/FFDI
2007 November 7-9,	7 Posters Prague (Cz)	Research	Europe	~300	ICT, UNIPG, ENEA, UL, KTU, LNE
	Bilateral meeting	Industry	Spain	45	
2007 November 12	(Madrid) CESFAC- Spanish Associaton of feed compound manufacturers- Innovation Group		1		SPES/FIAB
2007 November 13	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	11	SPES/FFDI
2007 November 13- 14	Networking: CREAWAL (Louvain-la-Neuve)	Industry (all food sectors), competitive poles, stakeholders, general public	Belgium	20	SPES/FEVIA
2007 November 14- 16	2 Posters	Research	EU countries		ICT, ESB
2007 November 14	Press release	Higher education	Spain	50	SPES/FIAB

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	(press)				
2007 November 15	Miraflores (Madrid) CSIC- Spanish National Research Council Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind	Czech Republic	9	SPES/FFDI
2007 November 15- 16	CCH participated and gave presentation at the Conference organised by the EUROPEAN COMMISSION: promoting the leadership of agrofood industry, held in Brussels, where CCH made a reference to the results of the WP5.	of sector) Research + Agribusiness sector	EU countries	~ 150	ССН
2007 November 15	Press release (press) Town hall of Jerez de la Frontera (Cádiz)	Industry	Spain	100	SPES/FIAB

Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 November 17	Bilateral meetings Madrid ESDEN, business school	Research	Spain	32	SPES/FIAB
2007 November 20	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	7	SPES/FFDI
2007 November 20	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	39	SPES/FFDI
2007 November 21	Bilateral meetings Madrid ASEBIO- Food Group- Platform for the promotion of the Spanish biotechnology sector	Research	Spain	17	SPES/FIAB
2007 November 22	X Congress of SEN Spanish Society of Nutrition	Industry, research and higher education	Spain	300	SPES/FIAB
2007 November 26- 27	Segovia Exhibition Madrid CDTI and Canmas	Research	Spain	30	SPES/FIAB
2007 November 26	TRF project promo	General public,	Czech Republic	41	SPES/FFDI

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	– Media Briefing	Higher education, Industry, Research, journalists			
2007 November 27	Direct e-mailing: dissemination of scientific results (translated)	Industry (all food sectors), stakeholders	Belgium	60	SPES/FEVIA
2007 November 28	Direct e-mailing: announcement of the TRUEFOOD newsletter n°3	Industry (all food sectors)	Belgium	2582	SPES/FEVIA
2007 November 28	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	26	SPES/FFDI
2007 November 29	Meeting	Industry, research and general public	Madrid-Spain	100	SPES/FIAB
2007 November 29	Website Flanders'FOOD: publication of the TRUEFOOD newsletter n°3	Industry (all food sectors)	EU countries	± 2.500 per month	SPES/FEVIA
2007 November 29	Website WAGRALIM: publication of the TRUEFOOD	Industry (all food sectors)	Belgium	± 2.000 per month	SPES/FEVIA

Dissemination of Kno	owledge – YEAR 2007.	/2008			
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 November 29	newsletter n°3 Website WAGRALIM: publication of scientific results (translated)	Industry (all food sectors)	Belgium All countries	± 2.000 per month	SPES/FEVIA
2007 November 29- 30	_ `	SMEs	Brusselles	5	SPES/FED
2007 Nov 29-Dec 2	Conference: Innovazione ed	Research Industry	Portugal Italy		ESB SPES/FED
2007 November 30	agroalimentare, esperienze a confronto Salerno	University, SMEs			
2007 December	Presentation	Research/Industr y	France		INRA
2007 December	Conference: Traditional Products (Oral Presentation of TRUEFOOD Project)	Research / industry / public authorities	Greece	50	SPES/SEVT
2007 December + 2008 April	News mails (FOKUS)	Industry (food processing companies)	DK	230	SPES/ FI
2007 December 6	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind	Czech Republic	13	SPES/FFDI

Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2007 December 10	Conference/Meetin g/TRF project's promo event	of sector) Higher education, Industry (all kind of sector)	Czech Republic	7	SPES/FFDI
2007 December 11	Press release (press)	Higher education	Spain	40	SPES/FIAB
	CETAL ULgo		G .		
2007 December 13	Bilateral meeting (Madrid) La Morella Nuts	Industry	Spain	4	SPES/FIAB
2007 December 17	Bilateral meeting (Barcelona) AFCA	Industry	Spain	5	SPES/FIAB
008 January - April	Direct e-mailing	Industry- Research	Turkey	4	KTU
2008 January 15	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	7	SPES/FFDI
2008 January 17-19	TRF project promo  – Media Briefing	General public, Higher education, Industry, Research, journalists	Czech Republic	29	SPES/FFDI
008 January 23	Conference/Meetin g/TRF project's	Higher education,	Czech Republic	14	SPES/FFDI

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	promo event	Industry (all kind of sector)			
2008 January 24	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	42	SPES/FFDI
		Political	Spain		
	Conference Toledo	organization		4	
2008 January 24	Regional Deparment (Consejería) of Agriculture				SPES/FIAB
2008 January 28	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	8	SPES/FFDI
2008 January 29	Bilateral meeting (Madrid) Spanish Ministry of Education and Research	Political organization	Spain	3	SPES/FIAB
2008 January 31	Bilateral meeting (Madrid) Technological Corporation of AndaULsia	Industry	Spain	6	SPES/FIAB
2008 February	Presentation	Industry	Norway	30	MATFORSK

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2008 February	Conference + Flyers	Industry	Hungary	30	SPES/FHFI
2008 February (15.)	Publications	Research	EU countries	~ 5000	UMIL
2008 February 3-6,	Conference San Francisco (USA)	Research	World countries	176	KTU
2008 February 7	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	8	SPES/FFDI
2008 February 12	Bilateral meetings Madrid - Vegenat and La Morella Nuts	Industry	Spain	4	SPES/FIAB
2008 February 13	Conference Polytechnic University of Zaragoza	Research	Spain	20	SPES/FIAB
2008 February 13	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	17	SPES/FFDI
2008 February 18	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector), Research (all kind of sector)	Czech Republic, Italy, Belgium, Hungary, Poland, Slovak Republic, Austria	56	ACTIA

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2008 February 18 - 22	UGENT participated at the "2nd International European Forum on System Dynamics and Innovation in Food Networks" in Innsbruck, Austria where UGENT presented its research findings and participated actively in the conference discussions to gain insight into the present debates concerning food/network related issues. The resulted publications are the	Research	EU countries	~ 50	UGENT/UMIL
2008 February 20	following: Course	Industry	Italy	50	ENEA
2008 February 21	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	8	SPES/FFDI
2008 February 27	Conference/Meetin	Higher	Czech Republic	21	SPES/FFDI

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2008 February 28	g/TRF project's promo event  Conference/Meetin	education, Industry (all kind of sector) Higher	Czech Republic	74	SPES/FFDI
2000 1 601 441 7 20	g/TRF project 's promo event	education, Industry (all kind of sector), Research (all kind of sector)	Ozech Republic		OT BOILT DI
2008 February 28	Conference talk: General Assembly of AUDA (Bastogne) (meat sector)	Industry (Meat sector)	Belgium	30	SPES/FEVIA
008 February 28	Distribution of paper documents: innovation issues for the meat sector (state of the art)	Industry (Meat sector)	Belgium	30	SPES/FEVIA
2008 February 28	State of the art (paper documents): innovation issues for the meat sector	Industry (Meat sector)	Belgium	30	SPES/FEVIA
2008 March	Poster/Conference	Research/Industr y	Europe		UGENT, MATFORSK
2008 March	TDU Newsletter n.3	SMEs	Italy	All the network	SPES/FED
2008 March	Seminar + Flyers	Higher education,	Hungary	70	SPES/FHFI; CCH

Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
Dutes		Research, Industry	uddiessed	addienee	/ III voived
2008 March	General Assembly of SEVT Oral Presentation of TRUEFOOD Project Dissemination of TRUEFOOD newsletters and brochure	Research / industry / public authorities	Greece	200	SPES/SEVT
2008 March 4	Conference "Food technology well financed"	Food industry	Austria	50	SPES/FIAA
	Conference Ulgo	Industry, research and	Spain	39	
2008 March 4	CETAL-Food Technological Centre	higher education			SPES/FIAB
2008 March 5	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic, Italy, Belgium, Hungary, Poland, Slovak Republic, Austria	8	ICT
2008 March 6	TRF project promo  – Media Briefing	General public, Higher education, Industry, Research,	Czech Republic	31	SPES/FFDI

lanned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2008 March 10	Congress Barcelona ALIMENTARIA	journalists Industry, research and higher education	Spain	220	SPES/FIAB
008 March 12	Conference	Research	Hungary		CCH
2008 March 17	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector), Research (all kind of sector)	Czech Republic, Italy, Belgium, Hungary, Poland, Slovak Republic, Austria	31	ACTIA, ICT
2008 March 18	Bilateral meetings San ULcar de Barrameda (Cádiz)- Barbadillo Wine Cellar	Industry	Spain	5	SPES/FIAB
008 March 20	TRUEFOOD Flyers	SMEs / administration/ Istitutions/ press	France	800	SPES/ANIA
2008 March 20	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	8	SPES/FFDI
2008 April	Conference + Flyers	Industry	Hungary	120	SPES/FHFI
2008 April	Institute visit + Flyers	Industry	Hungary	30	SPES/FHFI; CCH
008 April	Publication : Annual Report of		Belgium		SPES/FEVIA

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
2008 April 2	Flanders'FOOD Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	13	SPES/FFDI
2008 April 2	TRF project promo  – Media Briefing	General public, Higher education, Industry, Research, journalists	Czech Republic	25	SPES/FFDI
2008 April 2	Conference "Open Space in European Reserh"	Research & Industry	Europe	350	SPES/FIAA
2008 April 4	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	16	SPES/FFDI
2008 April 7	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector), Research (all kind of sector)	Czech Republic	71	SPES/FFDI
2008 April 10	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	7	SPES/FFDI
2008 April 11	Bilateral meetings	Industry and	Spain	28	SPES/FIAB

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	Madrid ASEBIO- Food industries Group	research			
2008 April 11	Meeting: presentation of the TRUEFOOD project and possible implementation of results for Wallonia and ULxembourg	Governmental representatives of Agriculture and Economy for ULxembourg	Belgium	2	SPES/FEVIA
2008 April 13	Seminar	Industry and regulating establishments	Turkey	50	KTU
2008 April 14	Publication: Annual Report of Flanders'FOOD	Industry (all food sectors), government, research centres and other stakeholders (other industries, retail)	Belgium	± 3.000 i	SPES/FEVIA
2008 April 14	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector), Research (all kind of sector)	Czech Republic, Italy, Belgium, Hungary, Poland, Slovak Republic, Austria	41	ACTIA, ICT
2008 April 16	Conference/Meetin g/TRF project's	Higher education,	Czech Republic	17	SPES/FFDI

Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	promo event	Industry (all kind of sector)			
2008 April 16	Visit to SMEs (Naples)	Industry	Italy	4	SPES/FED
2008 April 17	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	7	SPES/FFDI
2008 April 17	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	16	SPES/FFDI
2008 April 17	Brochures distributed at ENFFI seminar	Research + companies	Denmark	25	SPES/FI
2008 April 24-25	Presentation of the results of WP3, WP5 and WP8 in Tihany (Hungary) on the XVI <sup>th</sup> Scientific Conference of Food Quality Control.	Research + Agribusiness sector	Hungary	~ 80	ССН
2008 April 28	Conference/Meetin g/TRF project's promo event	Higher education, Industry (all kind of sector)	Czech Republic	38	SPES/FFDI
Every month	Direct e-mailing French	SMEs	France	250	SPES/ANIA

Dissemination of Kno	Dissemination of Knowledge – YEAR 2007/2008								
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved				
	TRUEFOOD information letter		'	'					
Running	Project web-site	Industry (food processing companies)	Denmark	230	SPES/FI				
monthly	Newsletter	Industry	Hungary	300	SPES/FHFI				
Every three months	Flyers Ankara İstanbul	Sector council (TOBB Food/	Turkey	100	SPES/SETBİR				
Every one month	Direct e-mailing	Drinks) Industry (meat and dairy sector)	Turkey	180	SPES/SETBIR				
Regularly updated	Project web-site	General public, Higher education, Research, Industry	Hungary		SPES/FHFI				
In progress	Conference: "Food Industry Competitiveness"	Higher Education Research Industry (all sectors)	Portugal	-	SPES/FIPA				
In progress	TV Programme about TRUEFOOD project	General Public	-	-	SPES/FIPA				
frequently	Project web-site	General Public	Austria		SPES/FIAA				
frequently	Flyers	Members of SPES/FIAA	Austria	300	SPES/FIAA				

Dissemination	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
2008	Distribution of 3 <sup>rd</sup> TRUEFOOD Newsletter to FFDI Members.	PK ČR′s	Czech Republic	2.500	FFDI
2008	Publication (Scientific journal). P. Gou*, R. Morales, X. Serra, M.D. Guàrdia and J. Arnau. Effect of 10-day ageing at 30 °C on the texture of dry-cured hams processed at temperatures up to 18°C in relation to raw meat pH and salting time. Meat Science 2008, 80:1333-1339.	Researchers	Worldwide		IRTA
2008	Oral presentation in Organic Farming Exhibition. 11 <sup>th</sup> Exhibition of Organic Farming-EcoFestival 2008. P. Bouchagier. Innovative strategies for the control of tomato diseases.	Public, Students, Farmers	Greece	25-30	TEI –II
2008	Publication (Scientific website). R. Morales, J. Arnau, X. Serra and P. Gou*. Meat pH influence on texture of dry-cured ham with reduced salt content and submitted to different storage temperatures. Website University of Bologne (http://amsacta.cib.unibo.it/archive/00002513/03/Proceedings_6th_		Worldwide		IRTA

Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
2008	Symp_Mediterranean_Pig_3v.p df).  Publication (Scientific journal).  M. Čandek Potokar and M. Škrlep. TRUEFOOD: predstavitev raziskave  Kmetijskega inštituta Slovenije v sklopu projekta. Reja prašičev, 2008, letn. 11, št. 1, str. 22-23	Researchers	Worldwide		KIS
2008	Flyers. Tradicionalna živila in inovacije – (ne)združljivo?	Industry	Slovenia		KIS
2008	Publication (Technical journal).  M. Skrlep, M. Candek-Potokar, T. Kava, B. Segula, V. Santé- Lhoutellier and P. Gou. Investigating PRKAG3 polymorphisms for traits of interest in dry ham production. Acta agriculture slovenica, supplement, 2008, 2: 93-98.	Industry - agrifood sector	Slovenia		KIS/IRTA/INRA
2008	Publication (Scientific website).  I. Muñoz, J. Arnau*, P. Gou and P. Picouet. New methods to assess and improve the quality of mediterranean dry-cured hams. Website University of Bologne (http://amsacta.cib.unibo.it/archiv e/00002513/03/Proceedings_6th_		Worldwide		IRTA

Dissemination	Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved		
2008	Symp_Mediterranean_Pig_3v.p df) Publication (Technical journal). C. Collell, J. Comaposada, P. Gou, P. Picouet, I. Muñoz and J. Arnau. Capacidad de la tecnología NIR para el control de los procesos cárnicos. Eurocarne, 2008, 164: 71-82.		Spain		IRTA		
2008	Publication (Technical journal). E. Fulladosa, E. Santos, N. Garcia-Gil, P. Picouet and P. Gou. La tomografía computerizada: herramienta para la caracterización del proceso de elaboración del jamón curado. Eurocarne, 2008, 171: 1-6.	Industry - Agrifood sector	Spain		IRTA		
2008	Monograph. M. Čandek Potokar, R. Marinšek- Logar, M. Pompe, I. Rogelj, J. Verbič, B. Žlender, Inovativnost v proizvodnji in trženju tradicionalnih živil - TRUEFOOD. Ljubljana: Kmetijski inštitut Slovenije: Univerza v Ljubljani, 2008. 1 zloženka ([6] str.), fotogr	Researchers	Slovenia		KIS		

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
2008	Publication (Scientific journal).  F. Sympoura, A. Cornu*, P. Tournayre, T. Massouras, J.L. Berdagué and B. Martin. Odor compounds in cheese made from milk of extruded linseed and α- tocopherol-supplemented cows. Journal of Diary Science 2008. In press	Researchers	Worldwide		INRA	
2008	Distribution of TRUEFOOD Czech brochures in the General Assembly of FFDI (2008).	PK ČR´s		2.500	FFDI	
2008	Distribution of 4 <sup>th</sup> TRUEFOOD Newsletter to FFDI Members.	PK ČR´s	Czech Republic	3.000	FFDI	
2008	Publication (Scientific journal). C. López, V. Briard-Bion, O. Menard, F. Rousseau, P. Pradel and J.M. Besle. Phospholipid, sphingolipid and fatty acid compositions of the milk fat globule membrane are modified by diet. Journal of Agricultural and Food Chemistry, 2008, 5226-5236.	Researchers	Worldwide		INRA	
2008	Distribution of FFDI Annual	PK ČR´s	Czech Republic	2.000	FFDI	

Dissemination	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
2008	Report 2008 and TRUEFOOD Newsletters in the Info-day organized by FFDI. Distribution of FFDI Annual Report 2008 (contains a full description of TRUEFOOD Project) to participants of the 3 special TRUEFOOD seminars in Prague. Distribution of TRUEFOOD	PK ČR´s	Czech Republic	3.000	FFDI
2008	Czech brochure and TRUEFOOD Newsletter to participants of 3 TRUEFOOD seminars in Prague.	PK ČR′s	Czech Republic	2.500	FFDI
May – Sept. 2008	Interviews	Food industry	Belgium	100	UGENT
May - Nov.r 2008	3 TRUEFOOD seminars	Industry	Greece	158	SEVT
May 2008 - April 2009	Professional Food Journal: Moderní obchod	Members	Czech Republic	5.000	FFDI
May 2008 - April 2009	Professional Food Journal: Výběr	Members	Czech Republic	5.500	FFDI
May 2008 - April 2009	Economy Journal: Komora CZ	Members	Czech Republic	7.000	FFDI
May 2008 - April 2009	Academy Journal: Akademický bulletin	Members	Czech Republic	5.300	FFDI

Dissemination  Planned/ actual Dates	of Knowledge – YEAR 2008/2009  Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
May 2008 - April 2009	Agricultural Journal: Zemědělec	Members	Czech Republic	5.800	FFDI
May 2008 - April 2009	Journal Svět potravin/World of Foodstuffs (FFDI's monthly periodics)	Members	Czech Republic	10.000	FFDI
May 2008 - April 2009	Newspaper: Potravinářský zpravodaj (FFDI's edited monthly newspaper)	Members	Czech Republic	4.500	FFDI
May 2008 - April 2009	2 Publications on international journals	Research	Worldwide		ICT
May 2008- April 2009	Informing SEVT Members of news and the results of TF project. More than 1500 direct emails.	Industry and Academia	Greece	SEVT Members	SEVT
May 2008- April 2009	E-newsletter Fevia-Flash: announcement of TRUEFOOD activities (Total: 43 articles Average: 3-4 articles every month)	Industry (all food sectors), stakeholders, research centres	Belgium	2.700-2.800	FEVIA
May 2008 - April 2009	Direct e-mailing: announcement of TRUEFOOD activities (Total :12 mailings Average: 1 mailing every month)	Industry (all food sectors), stakeholders, research centres	Belgium	30-2.500	FEVIA
May 2008- April 2009	Direct e-mailing and e- newsletters: announcement of TRUEFOOD activities (Total: 6 mailings	Industry (all food sectors), stakeholders, research centres	Belgium	450-1.500	FEVIA

Dissemination	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
	Average: 1 mailing every 2 months)				
May 2008- April 2009	Website Information about TRUEFFOD on the new FIPA Website (www.fipa.pt)	General Public Industry (all sectors) Research	Portugal	3 000	FIPA
May 2008- April 2009	Exhibition Stand TRUEFOOD in all FIPA events	General Public Industry (all sectors) Research	Portugal		FIPA
May 2008- April 2009	Truefood Info All editions	General Public Industry (all sectors) Research	Portugal	2 000	FIPA
May 2008- April 2009	Direct e-mailing and e- newsletters: announcement of TRUEFOOD activities (Total: 6 mailings Average: 1 mailing every 2 months)	Industry (all food sectors), stakeholders, research centres	Belgium	450-1.500	FEVIA
May 2008- April 2009	Direct e-mailing and e- newsletters: announcement of TRUEFOOD scientific results (info-sheets, translations of info- sheets, synthesis of "project news")	Industry (all food sectors), stakeholders, research centres, universities	Belgium	50-1.500	FEVIA

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
May 2008- April 2009	Total: 12-15 mailings  Average: 1 mailing every month  Dissemination by stakeholders  and intermediates: announcement  of TRUEFOOD activities  Minimum: 12 mailings  Average: 1 mailing every month	Industry (all food sectors), stakeholders, research centres	Belgium	30-2.500	FEVIA	
May 2008- April 2009	Dissemination of TRUEFOOD flyers and documentation (hard copies)	Industry (all food sectors), stakeholders, research centres, media	Belgium	50-100	FEVIA	
May 2008- April 2009	Visits: description of the TRUEFOOD project 6 visits/meetings Average: 1 visit/meeting every 2 months	Industry (all food sectors), stakeholders, research centres	Belgium	14	FEVIA	
May 2008- April 2009	Update of web pages on www.fevia.be Total :2 updates Average : 1 update every 6 months	Industry (all food sectors), stakeholders	Belgium Europe	8.500	FEVIA	
May 2008- April 2009	Update of web pages on www.fevia-pme.be (French) and www.fevia-kmo.be (Flemish)  Total :4 updates  Average : 1 update every 6	SMEs (all food sectors)	Belgium	500	FEVIA	

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
May 2008- April 2009	months Update of web pages on www.flandersfood.com Total :3 updates Average : 1 update every 4 months	Industry (all food sectors), research centres,	Belgium European countries	2.000	FEVIA	
May 2008- April 2009	Update of web pages on www.wagralim.be Total :3 updates Average : 1 update every 4 months	Industry (all food sectors), research centres,	Belgium Europe	1.000	FEVIA	
May 2008	Training course to SMEs	SMEs	Italy	50	FED/UMIL	
May 2008	Article for the evaluation of the 1 <sup>st</sup> seminar of TRUEFOOD project on ''Risk Assessment'' in SEVT newspaper	Industry	Greece	100	SEVT	
May 2008	Article for the following seminars of TRUEFOOD project in SEVT newspaper	Industry	Greece	100	SEVT	
May 2008	Presentation "What do European consumers think about Traditional Food?"	Industry/ Research, Nordic workshop in sensory science	North European Countries	100	MATFORSK , UGENT	
May 2008	Conference, presentation + Flyers	Canning Industry, Higher education, Research	Hungary	80	FHFI	

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
May 2008	Press release from Entreprendre Aujourd'hui (magazine) n°104	Walloon SMEs, Industry (all sectors)	Belgium	7.500	FEVIA	
May 2008	Conference talk : at Gembloux Agricultural University	University, students, general public	Belgium	40	FEVIA	
06 May 2008	Work group meeting	Industry and research	Spain	5	FIAB	
07 May 2008	Bilateral meetings	Industry and research	Spain	18	FIAB	
07 may 2008	Launch of sub web site (monthly)	Members and other food industries, public authorities, students, others	Denmark	3500	FI	
07 May 2008	Training	SMEs/Research/ Industry	Italy	30	ENEA	
08 May 2008	Spanish Technological Platform Meeting	Industry and research	Spain	18	FIAB	
08 May 2008	Conference "International Functional Foods Conference"	SME / Research Centres / Other Stakeholders	Portugal	300	ESB	
08 May 2008	Dissemination to SMEs during training	University SMEs Service company	1.1.1.1.1.1 Ita ly	32	FED ENEA	
09 May 2008	Flyers	General public	Italy	20	FED/UMIL	
12 May 2008	Briefing to Project's actual state of affairs and Law's key issue –	journalists	Czech Republic	31	FFDI	

Dissemination  Planned/ actual	of Knowledge – YEAR 2008/2009  Type	Type of audience	Countries	Size of audience	Partner
Dates	71	71	addressed		Responsible/ involved
	conference with Czech member of				
	Parliament (J. Bobošíková) Spanish Technological Platform	Industry and			
13 May 2008	Meeting	Research	Spain	16	FIAB
	Conference: "L'industria	Institutions			
13 May 2008	alimentare italiana e la politica	<b>SMEs</b>	Italy	150	FED
	della qualità"	Journalists	Italy		
	Conference (poster and				
	publication).  3 <sup>rd</sup> IOBC/WPRS International				
	Meeting. Working Group				
14-17 May	"Landscape management for	Researchers	Worldwide	100	IRTA
2008	functional biodiversity".	Researchers	Worldwide	100	IKIA
	ENITAB, Bordeaux (France). O.				
	Alomar*, J. Arno and R. Gabarra. Habitat management to enhance				
	biological control in lettuce.				
19 May 2008	Project's Meeting & Executive	Members	Czech Republic	27	FFDI
·	Committee		-		
21 May 2008	Legislation Committee	Members	Czech Republic	23	FFDI
	Briefing with the Group of Giovani Imprenditori (i.e. a Group				
21 May 2008	of Young entrepreneurs of	SMEs	Italy	20	FED
	Federalimentare)				
22 May 2008	Project Evaluation	Research	Spain	10	INIA
27 May 2008	Training, Flyers	Industry	Greece	27	AUA
28 May 2008	Dissemination to SMEs during training	Industry Institutions	Italy	33	FED

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
28 May 2008	Flyers	Industry Researchers of	Hungary	15	UMIL CCH	
28-30 May 2008	Conference	chain and network management	Europe	150	UGENT	
29 May 2008	<b>Executive Committee</b>	Members	Czech Republic	8	FFDI	
June 2008	Article for the meetings of ETP and NFP in SEVT newspaper	Industry	Greece	100	SEVT	
June 2008	Article for the 2 <sup>nd</sup> & 3 <sup>rd</sup> seminar of TRUEFOOD project organized by SEVT in SEVT newspaper	Industry	Greece	100	SEVT	
June 2008	Event WagrALIM – stand and distribution of TRUEFOOD documents	Industry (all food sectors), stakeholders, research centres, universities	Belgium	15	FEVIA	
June 2008	Seminar + Flyers	Industry	Hungary	29	FHFI / CCH	
June 2008	TRUEFOOD VIDEO showed at Sial and at every ANIA's big event (conference, general assembly, assises de l'agroalimentaire)	Industry and press	France	1.500	ANIA	
June 2008	Performance Magazine/ Publications	Meat and dairy sectors	Turkey	10.000	SETBIR	
June 2008	Doctoral thesis.		Spain		IRTA	

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
June, October, December 2008 - January and march 2009	R. Morales. Caracterización de jamones curados con textura adecuada para el loncheado mecánico y aceptables para los consumidores.  Publications about TRUEFOOD events, results, trainings in ANIA's flash	Industry, institution	France / Belgium	4500	ANIA	
02 June 2008	flyers & posters	Industry ( AYTAC/ Meat sector)	Turkey	100	SETBIR	
02-03 June 2008	Conference (Oral)	Research	International	50	ССН	
03 June 2008	Conference	Dairy Subcommittee	Turkey	33	SETBIR	
03 June 2008	Training, Flyers	Industry	Greece	18	AUA	
04 June 2008	Open day (stand, poster, research summary sheets, demonstration)	Food Industry	International	500	CCH/ UGENT	
04 June 2008	Meeting with stakeholders during Campden & Chorleywood open day	Industry Institutions	United Kingdom	400	SPES TDUs	
04 June 2008	Spanish Technological Platform Meeting	Industy and research	Spain	15	FIAB	
05 June 2008	Conference: "Ricerca ed Innovazione:le sfide dell'industria	SMEs Institutions	Italy	150	FED	

Dissemination of	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
	alimentare italiana"				
05 June 2008	Information Soiree	Members of FIAA and Industry Representatives	Austria	200	FIAA
09 June 2008	<b>Executive Committee</b>	Members	Czech Republic	8	FFDI
09 June 2008	Meeting	Industry	Spain	4	FIAB
12 June 2008	Añadiendo valor a los alimentos tradicionales presented in INPLISTA seminar.	Food sector	Spain	60	IRTA
17 June 2008	Meeting of WG for Bakery's production	Members	Czech Republic	12	FFDI
18 June 2008	Meeting of WG for Healthy Lifestyle	Members	Czech Republic	13	FFDI
18 June 2008	Science and Research Committee	Members	Czech Republic	36	FFDI
19 June 2008	Bilateral meeting	Industry and Research	Spain	4	FIAB
20 June 2008	Conference: "Sicurezza alimentare ed energia: strategie per il futuro"	Research Industry Institutions	Italy	200	FED /ENEA
24 June 2008	Spanish Technological Platform Meeting	Industry and Research	Spain	6	FIAB
26 June 2008	Spanish Technological Platform Meeting	Industry and Research	Spain	19	FIAB
30 June 2008	Spanish Technological Platform Meeting	Industry and Research	Spain	12	IRTA
July 2008	Article for the info day on	Industry	Greece	100	SEVT

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
	traditional and functional foods organized by SEVT and AUA in 6 <sup>th</sup> of October 2008 in SEVT newspaper					
01-02 July 2008	Conference	Meat Subcommittee (firms)	Turkey	19	SETBIR	
01 July 2008	Workshop VII FP: Feed, Nanotechnology and enviroment	Industry and Research	Spain	6	FIAB	
02 July 2008	Bilateral Meeting	Industry and Research	Spain	5	FIAB	
07 July 2008	Bilateral Meeting	Industry and Research	Spain	4	FIAB	
08 July 2008	Spanish Technological Platform Meeting	Industry and Research	Spain	8	FIAB	
09 July 2008	Spanish Technological Platform Meeting	Industry and Research	Spain	21	FIAB	
10 July 2008	Spanish Technological Platform Meeting	Industry and Research	Spain	6	FIAB	
11 July 2008	Spanish Technological Platform Meeting	Industry and Research	Spain	5	FIAB	
12 July 2008	Spanish Technological Platform Meeting	Industry and Research	Spain	4	FIAB	
12 July 2008	Spanish Technological Platform Meeting	Industry and Research	Spain	6	FIAB	
14 July 2008	Spanish Technological Platform Meeting	Industry	Spain	10	FIAB	
16 July 2008	Spanish Technological Platform	Industry and	Spain	16	FIAB	

Dissemination of Knowledge - YEAR 2008/2009					
Planned/ actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
	Meeting	Research			
17 July 2008	Conference / Exhibition "The practical application of predictive models of microbiology to support the competitiveness of the Food Industry"	Industry (all sectors) Researchers	Portugal	60	ESB
30 June – 01 July 2008	Conference	Researchers and food industry	European countries	50-80	UGENT
July 2008	Publication "Revista Indústria CIP" Article about TRUEFOOD: Framework and objectives	General Public Industry (all sectors)	Portugal	10.000	FIPA
July 2008	Poster"Percepción de los conceptos tradicional e innovación por los consumidores Europeos mediante agrupación de palabras clave"	Research/Industy , PS2008: 4° Simposio Internacional Percepnet. Ciencias Sensoriales y de la Percepción	Spain	150	IRTA
July 2008 (3 days)	International Fair: Foire de Libramont – stand with poster from CCH and brochures	Industry (all food sectors), agricultural sectors, consumers	Belgium	500	FEVIA
06-10 July	Conference	Researchers	Europe	180	UGENT

Dissemination	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
2008		Rural Development			
18 July 2008	Workshop:Success factors of innovations in SMEs of the beverages industry (Intensive training in small groups)	Industry (mainly fruit juice producers)	Germany	15	
24 July 2008	Executive Committee	Members	Czech Republic	7	FFDI
24 July 2008	Project's Workshop & Board of Companies Directors	Members	Czech Republic	29	FFDI / ICT
August 2008	Organised session and paper in proceeding book "Consumer-based definition and general image of traditional foods in Europe"	Research/ Industry EAAE Conference	European countries		UGENT/ IRTA /MATFORSK
August 2008	Poster/extended abstract "Europeans and traditional food: definition and perception from a consumers' perspective"	Research/Industr y, EAAE Congress	European countries	800	INRA/UGENT/SGGW/PE G/ MATFORSK/ IRTA
August 2008	Informing SEVT Members for the benchmark survey of University of Milan	Industry	Greece	SEVT Members	SEVT
August 2008	Presentation "Consumer based definition and general image of traditional foods in Europe"	Research/Industr y, EAAE Congress	European countries	800	UGENT/ IRTA /MATFORSK
August 2008	Publications	Research	European countries	100	UMIL, UGENT, CCH, PEG
August 2008	Bakery's Journal: Pekař a cukrář	Members	CR	3.200	FFDI
August 2008	Oral presentation	scientists	Aberdeen		INRA

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
			(Scotland)			
03-06 August 2008	Conference (Poster)	Research	International		AUA	
03-06 August 2008	Conference (Oral)	Research	International		AUA	
03-06 August 2008	Conference (Poster)	Research	International		AUA	
03-06 August 2008	Conference (Poster)	Research	International		AUA	
20 August 2008	Meeting of WG for Healthy Lifestyle	Members	Czech Republic	14	FFDI	
23–29August 2008	Conference contribution.  46 Mednarodni kmetijsko-živilski sejem, Gornja Radgona, A. Sebok, M. Pompe, I. Rogelj, T. Polak, I.G. Osojnik-Crnivec, M. Candek-Potokar and J. Verbic. TRUEFOOD - predstavitv projekta.				KIS	
24-27August 2008	Conference (poster presentation). 59 th Annual meeting of the European Association for Animal Production, Vilnius, (Lithuania). M. Škrlep*, M. Candek-Potokar, T. Kava, B. Segula, V. Santé- Lhoutellier and P. Gou. Screening polymorphisms at castr PRKAG3 genes for the traits of interest in	Researchers and industry (animal production)	European countries		KIS/ IRTA/ INRA	

Dissemination of Knowledge - YEAR 2008/2009					
Planned/ actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
	dry ham production				
24-28 August 2008	Poster in the 18th International Congress of Chemical and Process Engineering,	Higher education	Wordlwide	800	ICT
25 August 2008	Exhibition (fair)training	Food sector	Slovenia	50	ССН
26-29 August 2008	Congress	Agricultural economists researchers	international	800	UGENT, UMIL, CCH, PEG
27 August 2008	Training Seminar (second)	SMEs (15 SMEs meat and dairy sectors)	Turkey	35	SETBIR
27 August 2008	KON TV News Bulletin/ Press Release	General Public	ìTurkey	5 million	SETBIR
September 2008 – March 2009	Dissemination of documents during TRUEFOOD training activities	Belgian SMEs and stakeholders, French partners	Belgium France	130	FEVIA
September – October 2008	2 press releases were sent to the media for the Info-day.	General public	Greece		SEVT
September 2008	Exhibition IntraFood: stand of WagrALIM with TRUEFOOD documents	Industry (all food sectors), research centres, stakeholders	Belgium	20-50	FEVIA
September 2008	Article for the info day on traditional and functional foods organized by SEVT and AUA in 6 <sup>th</sup> of October 2008 in SEVT	Industry	Greece	100	SEVT

Dissemination Planned/	Dissemination of Knowledge – YEAR 2008/2009  Planned/						
actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved		
	newspaper	General Public					
September 2008	Publication "Revista Hiper Super" Article about Truefood	Industry (all sectors) Research	Portugal	5.000	FIPA		
September 2008	Project web-site www.ania-recherche.net 2500 connection monthly	General / professional publics	France / Belgium	2500	ANIA		
September 2008	Presentation  "Perception of Traditional Food products in Six European Countries Using Free Word Association".	Research/Industr y, Third European Conference and Sensory and Consumer Research	European countries	400	INRA/UGENT/SGGW/PE G/ MATFORSK/ IRTA		
September 2008	Poster "Defining Traditional Foods and Innovation in Traditional Foods: A Consumer Survey in Six European Countries".	Research/Industr y, Third European Conference and Sensory and Consumer Research Research/Industr	European countries	400	INRA/UGENT/SGGW/PE G/ MATFORSK/ IRTA		
September 2008	Poster "Traditional foods in Europe: General image and attribute perception".	y, Third European Conference and Sensory and Consumer	European countries	400	INRA/UGENT/SGGW/PE G/ MATFORSK/ IRTA		

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
		Research				
September 2008	Presentation, "Consumer preferences for possible innovations in traditional products"	Industry/Scientis t	European countries	90	SGGW	
September 2008	Presentation, "Traditional food concept perception among Polish consumers in the scope of the qualitative research	Industry/Scientis t	European countries	90	SGGW	
September 2008	Info-day for the traditional and functional foods organized by SEVT and AUA in the context of TRUEFOOD project	General public	Greece	210	SEVT, AUA	
September 2008	Publication	Industry (all sectors)	France		INRA	
September 2008	Conference	Higher education, Research	Hungary	40	FHFI	
04 September 2008	Executive Committee	Members	Czech Republic	8	FFDI	
08 September 2008	Round Table to Czech Technology Platform	Members	Czech Republic	20	FFDI/ ICT	
09-12 September 2008	Conference	Research	International		ESB	
10-12 September	Conference (Poster)	Research	International		ESB	

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
2008 09-11 September 2008	Conference on Chemistry and Life – 2 posters	Research, Education Industry	Czech Republic	120	ICT	
10 September 2008	WG for BIO Foodstuffs	Members	Czech Republic	26	FFDI	
11 September 2008	Meeting of WG for Frozen Food Products	Members	Czech Republic	12	FFDI	
11-12 September 2008	Conference	Food industry and researchers	European countries	100	UGENT	
15- 25 September 2008	3 National Newspaper/ Press release	General Public	Turkey	100.000	SETBIR	
16 September 2008	Steering Committee of Czech Technology Platform	Members	Czech Republic	9	FFDI	
16 September 2008	Conference	TDU	Italy	10	UNIPG	
17 September 2008	Legislation Committee	Members	Czech Republic	26	FFDI	
18 September 2008	Spanish Technological Platform Meeting	Research	Spain	4	CSIC	
19 September 2008	Congress	Research	Belgium	150	FEVIA	
19 September 2008	Seminar	Researchers	Belgium	11	UGENT	
21 September	Transfer Venue	Food Industry &	Austria	55	FIAA/LVA	

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
2008		Research				
22 September 2008	Media - Briefing - Conference	journalists	Czech Republic	29	FFDI	
22- 26 September 2008	Workshop	SMEs (meat, dairy and fishery sectors)	Turkey	35	SETBIR / KTU	
25 September 2008	Publication				AUA	
25 September 2008	Training	Food industry	Belgium	16	UGENT	
25-26 September 2008	Workshop	Food industry entrepreneurs and scientists	Poland	45	ССН	
25-26 September 2008	Conference (oral presentation).  Traditional and regional technologies and products in human nutrition. Lublin (Poland) M. Skrlep*, M. Candek-Potokar, T. Kavar, B. Segula, V. Santé- Lhoutellier and P. Gou. Screening polymorphisms at cast and PRKAG3 genes for traits of interest in dry ham production.	Researchers	Poland		KIS/ INRA/ IRTA	
26 September 2008	conference	Research and Industry	Italy	35	UNIPG	
26 September 2008	Conference : "L'industria del malto e della birra in Italia ed in Europa	SMEs Students Institutions	Italy	40	FED UNIPG	

Dissemination of	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
29 September 2008	Round Table to Czech Technology Platform with Ministry of Health CR	Members	Czech Republic	9	FFDI, ICT
30 September 2008	Food Meeting: Technology and process automatitation	Research	Spain	23	FIAB
30 September 2008	Training	Industry & Research	UK	40	
Autumn 2008	Publications	Research	International		UGENT
Autumn 2008	Accepted paper "Consumer- driven definitions of traditional food products and innovation in traditional foods. A qualitative cross-cultural study"	Appetite, 2009, 52, 345-354.	World-wide		INRA/UGENT/SGGW/PE G/ MATFORSK/ IRTA
October 2008	Publication of training activities in IFP-IPV catalogue	Industry (all food sectors), students, unemployed people	Belgium		FEVIA
October 2008	Press release from ATHENA (magazine) n°244	Walloon SMEs, Industry (all sectors), research centres, stakeholders, general public, consumers	Belgium	32.000	FEVIA
October 2008	Posters shown at the conference "produits traditionnels et sécurité des aliments" organised by the	Industry and institutions	European Union	200	ANIA

Planned/ actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
October 2008	french presidency of the EU Press release(press/radio/TV) on TRUEFOOD conference at SIAL	General public	France		ANIA
October 2008	Presentation "Tradition and modernity; consumer attitudes, nutritional aspects and improved food supply chain"	Industry TRUEFOOD conference, SIAL	European countries	40	INRA/UGENT/SGGW/PE G/ MATFORSK/ IRTA
October 2008	SIAL Exhibition	Industry	France and all participating	15.000	ANIA
October 2008	Training + Flyers Presentation" Definition and	Industry	countries Hungary	26	FHFI+CCH
October 2008	perception of traditional foods in Europe. Findings from the pan- European TRUEFOOD consumer survey".	Industry Ue2008, SIAL	France	250	UGENT
October 2008	Submitted paper "General image and attribute perception of traditional food products in Europe	Food Quality and Preference	Worldwide		UGENT/MATFORSK
October 2008	Conference on topic 'Bringing the Benefits of research to AgroFood SMEs' organized by Centre for Research & Technology Hellas (CERTH)	Research, Industry	Greece	100	SEVT
October 2008	Publication (Technical journal).  A. Costa, M.D. Guàrdia and P. Gou*. K-lactate addition in dry-	Industry - Agrifood sector	Spain		IRTA

Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
	cured meat products with reduced sodium content. Eurocarne 2008, 171 (oct).				
01 October 2008	Spanish Tecnological Platform Meeting	Industry and Research	Spain	21	FIAB
01 October 2008	The training on Module 1	Food industry	Hungary		ССН
01 October 2008	WG for BIO Foodstuffs	Members	Czech Republic	23	FFDI
02 October 2008	Training	Food industry	Belgium	11	UGENT
06 October 2008	Dissemination to SMEs during training	SMEs Istitutions	Italy	20	FED
06 October 2008	Info day, Flyers, Press release	General public	Greece	210	AUA
07 October 2008	Workshop	Food industry, research	United kingdom		ССН
07 October 2008	Inaugural meeting CSIC	Research	Spain	32	FIAB
07 October 2008	Conference (Poster presentation).  National Conference of the Greek Phytopathological Society, Athens (Greece). P. Bouchagier <sup>1</sup> , A. Kalamarakis <sup>2</sup> , Y. Troyanos <sup>3</sup> , F. Karamaouna <sup>2</sup> , E. Skotti <sup>4</sup> , V. Mavroeidi <sup>1</sup> and E. Markellou <sup>2</sup> .	Researchers, academics, technicals from private sector, extensionists and civil servants	Greece	300	TEI –II

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
	Effect of two foliar elicitors Milsana® and Chitoplant® on powdery mildew development, plant growth and quality characteristics of tomatoes.					
08 October 2008	I+D+i Work Group Meeting	Industry and Research	Spain	25	FIAB	
09 October 2008	Spanish Tecnological Plarform meeting	Industry	Spain	25	FIAB	
09-10 October 2008	1 <sup>st</sup> National Congress on Milk and Milk Products, Greek Dairy Committee – Member of IDF,		Greece		SEVT	
10 October 2008	Meet Congress	Research	Spain	45	IRTA	
12 October 2008	Management of Modern Dairy Enterprises- Small Country- Big Partner- Holland Dissemination- flyers	SMEs, ministry of Agriculture, CIAA, Holland Ambassy	Turkey	250	SETBIR	
12-15 October 2008	36° Congresso Nazionale della Società Italiana di Microbiologia. Roma	Microbiologist	Italy		ISS	
15 October 2008	Meeting of WG for Healthy Lifestyle	Members	Czech Republic	12	FFDI	
15 October 2008	TVHB General Congress Dissemination- flyers	Veterinary Associations, SMEs	Turkey	400	SETBIR	
16 October	Workshop	General public/	Italy	200	ENEA	

Dissemination of	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
2008		Industry/ Research/SMEs			
16 October 2008	First Acuiculture Platforms Meeting	Research	Spain	12	FIAB
16 October 2008	Meeting	Research	Spain	15	FIAB
18 October 2008	CIAA Conference- Dissemination- flyers	SMEs, ministry of Agriculture, CIAA, TGDF	Turkey	200	CIAA
19 October 2008	Congreso de Tratamientos no termicos	Research	Spain	60	FIAB
20-22 October 2008	Trophelia Europe 2008, first conference of TRUEFOOD and training course of TRUEFOOD	Research	France	40	ANIA
21 October 2008	Salon International de l'Alimentation (SIAL)	Industry	Paris (France).	60	INRA
21 October 2008	Conference	Research	European Countries		FED/UMIL/UGENT
21 October 2008	TRUEFOOD Conference (Oral)	Industry	International	100	AUA
21 October 2008	Dissemination SIAL- Launch of French Platform "Food for Life"	Institutions	France	30	FED
23 October 2008	Workshop	General public/ Industry Research/SMEs	Italy	200	ENEA
23 October	Seminar within	Paris- General	France	220	FED

Dissemination	Dissemination of Knowledge - YEAR 2008/2009					
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
2008	the context of the French Presidency of the Council of the European Union	Directorate for Food of the Ministry of Agriculture and Fisheries			INRA	
23 October 2008	Executive Committee	Members	Czech Republic	7	FFDI	
23 -24 October 2008	Food Fair : "Salone internazionale del gusto"	SMEs	Italy	100	FED	
23-24 October 2008	Conference (Oral)	Research & Industry	International	100	AUA	
23-24 October 2008	Conference in the framework of the French Presidency of the European Union Council - Traditional Foodstuffs and Safety.	European responsible of food safety, scientists	France	120	INRA	
27 October 2008	Spanish Technology Platform	Industry and Research	Madrid-Spain	21	FIAB	
29 October 2008	Spanish Technology Platform	Industry and Reseach	Madrid-Spain	17	FIAB	
30 October 2008	Science and Research Committee	Members	Czech Republic	36	FFDI	
30 October 2008	Conference "Jornadas da Alimentação 2008"	General Public Industry (all sectors) Research	Portugal	150	FIPA	
30 October 2008	Workshop	Food industry, research, higher education	Hungary	40	ССН	

Dissemination of	Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved		
30-31 October 2008	Annual Seminary 2008	Research	Spain	50	FIAB		
November 2008- January 2009	Conference + Flyers	Higher education, Research, Industry	Hungary	70	FHFI		
November 2008	Exhibition	General public	Hungary	250	FHFI		
November 2008 – January 2009	TRUEFOOD logo on partner website	General public, consumers, suppliers (1000 visitors per month)	Belgium Europe	1.000	FEVIA		
November 2008	Training + Flyers	Industry	Hungary	20	FHFI/CCH/UGENT		
November 2008	Article for the Info-Day in SEVT Newspaper	Industry	Greece	100	SEVT		
November 2008	Article for the announcement of the 4 <sup>th</sup> seminar of TRUEFOOD project on "Crisis Management" in SEVT Newspaper	Industry	Greece	100	SEVT		
November 2008	Exhibition – Open days at SME Salaisons du Pont d'Amour, Dinant	Meat sector, students, consumers	Belgium	200	FEVIA		
November 2008	Press release from L'Avenir du Luxembourg (newspaper)	General public	Belgium	60-100.000	FEVIA		
November 2008	Press release from Le Jour de Verviers (newspaper) – same	General public	Belgium	50.000	FEVIA		

Dissemination of Knowledge – YEAR 2008/2009					
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
November 2008	article as previous one Publication "Revista Segurança e Qualidade Alimentar" Article about TRUEFOOD: Framework and objectives	General Public Industry (all sectors) Research	Portugal	20.000	FIPA
05 November 2008	The training on Module 2	Food industry	Hungary		ССН
05 November 2008	Institutional Event: APERTAMENTE	SMEs Institutions University	Italy	120	FED
05 November 2008	Film TRUEFOOD during the Institutional Event "APERTAMENTE"	SMEs Institutions University	Italy	120	FED
05 November 2008	Conference/Film	General public/ Research/Industr y	Italy	300	ENEA
05 November 2008	Seminary:" Quality and innovation in juice sector"	Industry and research	Spain	35	FIAB
05-06 November 2008	II International Congress in technology food "Food and Health"	Research	Spain	160	FIAB
05- 07 November 2008	Conference (Poster)	Research	International		ESB
05- 07 November 2008	Conference (Poster)	Research	International		ESB

<b>Dissemination</b>	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
09 November 2008 10-11	Spanish Technology Platform	Research	Spain	5	FIAB
November 2008	Administration meeting, OPIS	Research	Spain	4	FIAB
12 November 2008	IFEMA	Industry and research	Spain	30	FIAB
13 November 2008	Spanish Tecnological Platform meeting	Industry and research	Spain	8	FIAB
13 November 2008	Flyers	Industry	Hungary	15	ССН
14 November 2008	Advisory WG of Czech Technology Platform with Minister of Agriculture CR	Members	Czech Republic	8	FFDI, ICT
14-15 November 2008	Workshop: XXXVII. Osnabrücker Kontaktstudientage: "Erfolgsfaktor Produktinnovation" (Success factor product innovation)	Research, companies	Germany	120	
18 November 2008	Spanish Tecnological Platform meeting	Industry and research	Spain	10	FIAB
19-21 November 2008	Innovation in no termical technologies on foods workshop	Industry and research	Spain	111	FIAB
19-21 November	Poster in the 4 <sup>th</sup> International Symposium on Food Packaging –	Higher education	Worldwide	300	ICT

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
2008	Scientific Developments					
20 November 2008	supporting Safety and Quality. Spanish Tecnological Platform meeting	Industry and research	Spain	42	FIAB	
20 November 2008	<b>Executive Committee</b>	Members	Czech Republic	11	FFDI	
20 November 2008	Board of Companies Directors	Members	Czech Republic	27	FFDI	
20 November 2008	Meeting of WG for Frozen Food Products	Members	Czech Republic	22	FFDI	
23 – 26 November 2008	The 38th CROATIAN DAIRY EXPERTS SYMPOSIUM with international participation.	Scientist , dairy industry	Slovenia		UL	
24 November 2008	Briefing – conference with Czech Member of EU Parliament	journalists	Czech Republic	17	FFDI	
25 November 2008	Conference "Food Industry Competitiveness"	Higher Education Research Industry (all sectors)	Portugal	100	FIPA	
25 November 2008	EFSA/EUROPASS Conference	General public/ Industry	Italy	100	ENEA	
25 November 2008	Meat industry and innovation. Spanish Tecnological Platform meeting	Industry and research	Spain	52	FIAB	
26 Nov. 2008	Spanish Tecnological Platform meeting	Industry and research	Spain	15	FIAB	

Dissemination	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
26 November 2008	Legislation Committee	Members	Czech Republic	33	FFDI
26 – 27 November 2008	Conference: "FROM FARMS TO MARKET: PROVIDING KNOW-HOW AND FINANCE"	Institutions Companies Journalists	Egypt	250	FED
28 November 2008	Training/ Film	Indutry/SMEs	Italy	30	ENEA
28 November 2008	Dissemination to SMEs during training to SMEs	SMEs University	Italy	30	FED
28 November 2008	3 conferences "Traditional food products competitiveness: overview and control perspective" Confindustria.	Industry	Italy	20	ISS /INRA
Winter 2008	Publications	Research	International		UGENT
December 2008-April 2009	Flyers on Ardenne Ham – with TRUEFOOD logo as partner	General public, local tourism	Belgium	50.000	FEVIA
December 2008	Article for the 4 <sup>th</sup> seminar of TRUEFOOD project on "Crisis Management" in SEVT Newspaper	Industry	Greece	100	SEVT
December 2008	Publication (Scientific journal). M. Čandek Potokar and M. Škrlep. Lastnosti prašičev, primernih za pršute z manjšo	Researchers	Worldwide		KIS

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
	vsebnostjo soli. kmeč. glas, 17. dec. 2008, letn. 65, št. 51, str. 9					
December 2008	2 Articles (Norwegian)	Website www.nofima.no	Norway		MATFORSK	
December 2008	Article "Christmas means traditional food"	Website www.nofima.no	Worldwide		MATFORSK	
December 2008	2 Articles (Norwegian)	Newspapers, "Nationen" and "VG"	Norway		MATFORSK	
December 2008	Submitted paper "How do European consumer define the concept of Traditional Food? Evidence from a survey in six European countries"	Agribusiness	Worldwide		INRA/UGENT/SGGW/PE G/ MATFORSK/ IRTA	
December 2008	Invitation to seminar in January by: Newsletter	Members and other food industries	Denmark	680	FI	
03 December 2008	WG for BIO Foodstuffs	Members	CR, FFDI's premises, Prague	26	FFDI	
03 December 2008	Conference	Food industry	Hungary	40	ССН	
04 December 2008	Plenary Meeting of Czech Technology Platform	Members	CR, Kaiserštejnský palác, Prague	52	FFDI, ICT	
04 December 2008	Robotic Meeting	Industry and research	Spain	26	FIAB	

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
09 December 2008	Environmental Affairs Committee	Members	CR, FFDI's premises, Prague	34	FFDI	
09 December 2008	Workshop	Austrian and Swiss Food Industries	Switzerland	25	FIAA	
09 December 2008	Spanish Technological Platform meeting	Industry and research	Spain	32	FIAB	
10 December 2008	Spanish Technological Platform meeting	Industry and research	Spain	25	FIAB	
11December 2008	Spanish Technological Platform meeting	Industry and research	Spain	34	FIAB	
11 December 2008	Spanish Technological Platform meeting	Industry and research	Spain	23	FIAB	
11 December 2008	Doctoral thesis.  M. Charlet. Dynamiques de croissance de Streptococcus thermophilus, Lactobacillus delbrueckii Lactobacillus helveticus dans les fromages à pâté pressée cuite pendant la phase d'acidification sous-presse.		France		INRA	
12 December 2008	Flyers	Industry	National	15	ССН	
12-14 December 2008	Conference (Poster)	Research	National		AUA	

Planned/ actual	of Knowledge – YEAR 2008/2009  Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
Dates  16 December	Projects and companies forum	Industry and	Spain	30	FIAB
2008 17 December		research	Spain	30	TIAD
17 December 2008	Meeting of WG for Healthy Lifestyle	Members	Czech Republic	41	FFDI
2009	Publication (Scientific journal). E. Fulladosa, X. Serra, P. Gou and J. Arnau*. Effects of potassium lactate and high pressure on transglutaminase restructured drycured hams with reduced salt content. Meat Science 2009, 82: 213-218.	Researchers	Worldwide		IRTA
2009	Publication (Scientific journal).  V.H. Segtnan, M. Høy, O. Sørheim, A. Kohler, F. Lundby, J.P. Wold and R. Ofstad. Non- contact salt and fat distributional analysis in salted and smoked salmon fillets using X-ray computed tomography and NIR interactance imaging. Journal of Agricultural and Food Chemistry, 2009, 57: 1705-1710. Publication (Scientific journal).	Researchers	Worldwide		MATFORSK
2009	V.H. Segtnan, M. Høy, F. Lundbyand B. Narum and J.P. Wold. Fat distributional analysis in salmon fillets using non-contact	Researchers	Worldwide		MATFORSK

Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
2009	near infrared interactance imaging: A sampling and calibration strategy. Journal of Near Infrared Spectroscopy.  Submitted Publication (Scientific journal). M. Gobert, B. Martin, A. Ferlay, Y. Chilliard, B. Graulet, P. Pradel, D. Bauchart and D. Durand. Plant polyphenols associated with vitamin E efficiently reduce plasma lipoperoxidation in dairy cows given n-3 polyunsaturated fatty acids. Journal of Dairy Science.  Submitted	Researchers	Worldwide		INRA
2009	Publication (Scientific journal). A. Costa, I. Muñoz and P.Gou*. Ions intake and diffusivity in pork meat brine-salted with NaCl and K-lactate. Journal Food Research. Submitted	Researchers	Worldwide		IRTA
2009	Publication (Scientific journal). M. Gratacós-Cubarsí, A. Ribas-Agustí, J.A. García-Regueiro and M. Castellari*. Simultaneous Determination of Intact Phenolics and Glucosinolates by UPLC-	Researchers	Worldwide		IRTA

Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
2009	DAD-MS/MS in Brassica oleracea var. Botrytis. Food Chemistry. Submitted Publication (Scientific journal). M. Candek-Potokar. Association of PRKAG3 and CAST genetic polymorphisms with traits of interest in dry ham production: comparative study in three countries, France, Slovenia and Spain. Livestock Science. Submitted	Researchers	Worldwide		KIS
2009	Publication (Scientific journal). A. Costa-Corredor, X. Serra, J. Arnau and P. Gou. Reduction of NaCl content in restructured dry- cured hams: post-resting temperature and drying level effects on physicochemical and sensory parameters. Meat Science. Submitted	Researchers	Worldwide		IRTA
2009	Publication (Scientific journal). E. Fulladosa, E. Santos-Garcés, P. Picouet and P. Gou. Salt and water content prediction by Computed tomography in dry-	Researchers	Worldwide		IRTA

Dissemination	Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved		
2009	cured hams. Journal of Food Engineering. Submitted Publication (Scientific journal). J. Doltra and P. Muñoz. Simulation of nitrogen leaching from a fertigated crop rotation in a Mediterranean climate using the EU-Rotate_N and Hydrus-2D models. Agricultural Water Management. Submitted	Researchers	Worldwide		IRTA		
2009	Publication (Scientific journal).  A. Ferlay, B. Martin, S. Lerch, P. Pradel and Y. Chilliard. Effects of supplementation of maize silage diets with extruded linseeds, vitamine E or plant extracts rich in polyphenols and morning vs. evening milking on milk fatty acid profiles in Holstein and Montbéliarde cows. Animal.  Submitted	Researchers	Worldwide		INRA		
2009	Distribution of 5 <sup>th</sup> TRUEFOOD Newsletter to	PK ČR's members and	Czech Republic	2.500	FFDI		

<b>Dissemination</b>	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
2009	FFDI Members. Publication (Scientific journal). F. M. Charlet, G. Duboz, F. Faurie, JL. Le Quéré, F. Berthier*. Multiple interactions between Streptococcus thermophilus, Lactobacillus helveticus and Lactobacillus delbrueckii strongly affect their growth kinetics during the making of hard cooked cheeses. International Journal of Food Microbiology 2009, 131(1), 10-19.	non Researchers	Worldwide		INRA
2009	Distribution of TRUEFOOD leaflet (Czech language) on actual project's state of affairs towards members and non-members (making business in Czech Foodstuffs industry).	PK ČR's members and non	Czech Republic	2.500	FFDI
January 2009 – April 2009	7 SMEs were visited by TSM	SMEs	Greece	SEVT Members	SEVT
January 2009	Interviews	Support organisations of food industry	Belgium	16	UGENT
January 2009	Submitted paper "Alternative	Food Quality and	Worldwide		MATFORSK

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
	methods for combining design variables and consumer preference with information about attitudes and demographics in conjoint analysis"	Preference				
January 2009	Invitation to seminar in January by: Established Network Working groups Committees	Members and other food industries	Denmark	250	FI	
January 2009	Invitation to Conference: Ease of Opening. Theme: User-friendly Packaging	Members, researchers and the press	United Kingdom, USA, Norway, Sweden, Denmark	50	FI	
08 January 2009	Executive Committee	Members	CR, FFDI's premises, Prague	14	FFDI	
29 January 2009	Spanish Technological Platform Meeting	Industry and Research	Spain	28	FIAB	
20 January 2009	Spanish Technological Platform Meeting	Industry and Research	Spain	22	FIAB	
20 January 2009	Publication				ESB	
22 January 2009	Meeting of WG for Frozen Food Products	Members	Czech Republic	23	FFDI	
26 January 2009	EFSA/EUROPASS Conference	General public /Industry	Italy	100	ENEA	

Dissemination of	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
27 January 2009	Briefing – conference	journalists	CR	18	FFDI
30- 31 January 2009	I. World Doner Congress Dissemination- 10 minute oral presentation	SMEs (Turkish Doner producers)	Turkey	200	SETBIR
February 2009	Publications	Research	EU	5000	UMIL
February – March 2009	Interviews	Food industry	Belgium	6	UGENT
February 2009	Training + Flyers	Industry	Hungary	16	FHFI+CCH
February 2009	Press release from TV La Une, RTBF, on WagrALIM and one TRUEFOOD training activity	Industry (all sectors), economical stakeholders, general public, students	Belgium European countries		FEVIA
February 2009	Article "I prodotti alimentari tradizionali dal punto di vista del consumatore: un'indagine in sei Paesi Europei"	Web journal, www.agriregioni europa.it	Italy		PE Group
02 February 2009	Seminar	Members and other food industries	Denmark	100	FI
03 February 2009	Spanish Tecnological Platform Meeting	Industry and Research	Spain	21	FIAB
04 February 2009	WG for BIO Foodstuffs	Members	Czech Republic	25	FFDI

Dissemination	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
05 February 2009	Spanish Technological Platform	Industry and Reseach	Spain	17	FIAB
05 February 2009	Meeting of WG for Trade Policy & Marketing	Members	Czech Republic	16	FFDI
09 February 2009	"Agricultural Contaminants – Fusarium Forum" Brussels – oral presentation	Research, Industry	European countries		ICT
10 February 2009	Training	Food industry	Belgium	11	UGENT
10 February 2009	Spanish Technological Platform Meeting	Industry and research	Spain	15	FIAB
11 February 2009	Executive Committee	Members	Czech Republic	8	FFDI
11 February 2009	Spanish Technological Platform meeting	Industry and research	Spain	16	FIAB
12 February 2009	Steering Committee of Czech Technology Platform	Members	Czech Republic	17	FFDI/ ICT
12 February 2009	Science and Research Committee	Members	Czech Republic	42	FFDI
14– 17 February 2009	Dissemination to beer fair: Pianeta birra	SMEs	Italy	100	FED
14-17 February 2009	exhibition	General public/Industry	Italy	100	UNIPG
16-20 February	Conference	Researchers and food industry	International	90	UGENT

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
2009						
17 February 2009	The training on Module 3	Food industry	Hungary		ССН	
17 February 2009	Environmental Affairs Committee	Members	Czech Republic	31	FFDI	
18 February 2009	Meeting of WG for Healthy Lifestyle	Members	Czech Republic	35	FFDI	
18 February 2009	Meeting of WG for Bakery's production	Members	Czech Republic	35	FFDI	
23 February 2009	WG for Alcohol	Members	Czech Republic	11	FFDI	
25 February 2009	Legislation Committee	Members	Czech Republic	35	FFDI	
March 2009- April 2009	Publications and website on two TRUEFOOD training activities in catalogue "First SMEs European week"	Industry (all sectors), in particular SMEs, stakeholders, government, students, unemployed people	Belgium European countries	Unknown	FEVIA	
Spring 2009	Publication	Research	International		UGENT	
March 2009	SEVT annual report	General public	Greece	1000	SEVT	
March 2009	Factory visit+ Training + Flyers	Industry, Research	Hungary	39	FHFI+CCH+UGENT	
March 2009	Conference + Flyers	Industry	Hungary	30	FHFI	
March 2009	Conference "Cyprus Food & Drinks Infoday"	SMES, police makers of	Cyprus	80	SEVT	

Dissemination of Knowledge – YEAR 2008/2009							
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved		
		Cyprus government					
March 2009	Resubmitted paper "Factors influencing traditional food consumption"	Appetite	Worldwide		UGENT, MATFORSK, IRTA		
March 2009	General Assembly of SEVT	Industry, General public, police makers, reserchers	Greece	250	SEVT		
5 March 2009	Conference	TSM	European countries	15	UNIPG		
6 March 2009	Training: standard for agricultural production – GlobalGAP.	Members, non- members	Croatia	64	FFDI/ ICT		
11 March 2009	Science and Research Committee	Members	Czech Republic	43	FFDI/ ICT		
18 March 2009	Conference Participants plus TV and Internet articles occurences in the following days	Research Institutions and Companies	Italy	34	PEG / SPES GEIE / FED		
18 March 2009	Dissemination to SMEs during training	SMEs Institutions	Italy	35	FED PEG		
19 March 2009	Seminar	Researchers	Belgium	10	UGENT		
19 March 2009	Executive Committee	Members	Czech Republic	8	FFDI		
19 March 2009	Board of Companies Directors	Members	Czech Republic	42	FFDI		
20 March	Training: HACCP in food chain.	Members, non-	Czech Republic	54	FFDI, ICT		

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
2009		members				
25 March 2009	Seminar	Food industry	Hungary	40	ССН	
26-27 March 2009	Congress	Agricultural economist researchers	Eastern Europe + international	40	CCH /UMIL /UGENT	
27 March 2009	Training: manager of food safety (ISO 22000, BRC, IFS).	Members, non- members	CR	51	PK ČR, ICT, IAEI	
30 March 2009	VII Frame Programme 3rd Conference	Industry,research and administration	Spain	200	FIAB	
April 2009	Article (Norwegian)	Website www.nofima.no	Norway		MATFORSK	
April 2009	Article (Norwegian)	Newpaper, "Nationen"	Norway		MATFORSK	
April 2009	Resubmitted paper "Perception of traditional food products in six european countries using free word association"	Food Quality and Preference	Worldwide		INRA/UGENT/SGGW/PE G/ MATFORSK/ IRTA	
April 2009	Resubmitted paper "Profile and projected image of traditional food consumers in Europe"	British Food Journal	Worldwide		UGENT/ MATFORSK	
April 2009	Presentation "Traditional and regional foods"	Research/Industr y, Second SAFE Consortium	European countries	250	MATFORSK/ UGENT/IRTA	
April 2009	Presentation "Innovations in traditional food products: How risk perception may influence	Research/Industr y, Second SAFE Consortium	European countries	250	IRTA	

Dissemination of	of Knowledge – YEAR 2008/2009				
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
April 2009	their acceptance".  Sending to SEVT Members the Infosheets / Uploading the Infosheets to the greek TRUEFOOD website	Industry	Greece	SEVT Members	SEVT
April 2009	Publication: Annual Report of Flanders' FOOD	Industry (all food sectors), government, research centres and other stakeholders (other industries, retail)	Belgium	2.000	FEVIA
April 2009	Presentation "Consumer perception of traditional foods"	Industry workshop, European Sensory Network	European countries	40	MATFORSK, INRA, SGGW
01 April 2009	WG for BIO Foodstuffs	Members	Czech Republic	28	FFDI
02 April 2009	Meeting of WG for Frozen Food Products	Members	Czech Republic	19	FFDI
02 April 2009	Publication				ESB
09 – 10 April 2009	Training: manager of food safety.	Members, non- members	Czech Republic	50	FFDI/ICT
15 April 2009	Red Meat Sector in World and in Turkey- flyers- leaflets	Meat Sector SMEs, ministry of Agriculture, CIAA, TOBB	Turkey	200	SETBIR
16 April 2009	Spanish Technological Platform	Industry and	Spain	15	FIAB

Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
	Meeting	Research			
16-17 April 2009	Conference (oral presentation).  II workshop on the use of Computed Tomography (CT) in pig carcass classification. Other CT applications: live animals and meat technology. Monells, Girona (Spain). N. Garcia-Gil, E. Santos- Garcés, I. Muñoz, J. Arnau and P. Gou*. Evaluation by computed tomography of the effect of different treatments on the raw hams before and during salting.	Researchers	Worldwide		IRTA
16-17 April 2009	Conference (oral presentation).  II workshop on the use of Computed Tomography (CT) in pig carcass classification. Other CT applications: live animals and meat technology. Monells, Girona (Spain). E. Fulladosa, I. Muñoz, E. Santos-Garcés, P. Picouet and P. Gou. Calibration of Computed Tomography for prediction of salt and water content in dry-cured ham	Researchers	Worldwide		IRTA
16-17 April	Conference (oral presentation).	Researchers	Worldwide		IRTA

Planned/ actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved
2009	II workshop on the use of Computed Tomography (CT) in pig carcass classification. Other CT applications: live animals and meat technology. Monells, Girona (Spain). P. Picouet, E. Santos- Garcés, E. Fulladosa and A. Costa. An approximation of salt diffusion coefficient in ham processing using CT data: preliminary results.				
16-17 April 2009	Conference (oral presentation).  II workshop on the use of Computed Tomography (CT) in pig carcass classification. Other CT applications: live animals and meat technology. Monells, Girona (Spain). E. Santos-Garcés, I. Muñoz, P. Gou and E. Fulladosa. Development of line profiles and images of distribution of salt and water to study dry-cured ham process.	Researchers	Worldwide		IRTA
20-24 April 2009	Conference (Poster)	Research	International	150-200	FIAB
20-24 April 2009	Conference (poster presentation). 4th International Dairy Federation Dairy Science and Technology	Researchers	Worldwide		INRA

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
20-24 April 2009	Week. Rennes (France). S. Buchin*, F. Bérodier, G. Duboz, F. Faurie, R. Palme, M.H. Duployer and V. Gagnaire. The characteristics of hard cooked cheeses are affected by thermophilic starter combinations, milk and technological parameters. Conference (Oral presentation). 4th International Dairy Federation Dairy Science and Technology Week. Rennes (France). V. Gagnaire, M. Piot, D. Mollé, J. Jardin, S. Pezennec, A. Ferré, E. Desmars, G. Duboz and S. Buchin. Combination of lactobacilli strains can modulate the anti-hypertense activity in hard cooked cheeses	Researchers	Worldwide		INRA	
20-24 April 2009	2 Posters 4 <sup>th</sup> IDF Dairy Science & Technology	Research and industry	European countries		INRA	
20-24 April 2009	Conference (poster presentation). 4th International Dairy Federation Dairy Science and Technology Week. Rennes (France): V. Gagnaire, M. Piot, D. Mollé, J.	Researchers	Worldwide		INRA	

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
20-24 April 2009	Jardin, A. Ferré, Duboz and S. Buchin. Phosphopeptides in hard cooked type cheeses are only partially degraded by peptidases of thermophilic lactic acid bacteria Conference (poster presentation). 4th International Dairy Federation Dairy Science and Technology Week. Rennes (France). L. Champonnois, S, Pochet and F. Berthier. Interactions between bacteria and the cheese matrix regarding amino acid	Researchers	Worldwide		INRA	
21 April 2009	accumulation during manufacture. Conference EFSA, Prague ("Food Research in Support Science- Based Regulation") - poster	Research, Industry, Government	European Countries	180	ICT	
21 April 2009	Training	Food industry	Portugal	90	UGENT	
21 April 2009	Workshop "Strategic management of Food Chain"	General Public Industry (all sectors) Research	Portugal	90	UGENT	
22 April 2009	FIL congress	Scientist , dairy industry	France	200	INRA	
22 April 2009	Platform's Meeting	Industry and Research	Spain	32	FIAB	
22- 24 April	CYTALIA Congress	Industry	Spain	60	FIAB	

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
2009 23 – 24 April 2009	Training: sustainability and audit of HACCP. Conference (poster presentation).	Members, non- members	Czech Republic	44	FFDI/ ICT	
22-25 April 2009	3rd International Congress on Food and Nutrition. Antalya (Turkey). A. Ribas-Agustí, C. Sárraga, M. Gratacós-Cubarsí, J.A. García-Regueiro, M. Hidalgo, P. Muñoz and M. Castellari. Nutritional properties of Brassica oleracea L. var. botrytis as affected by the ripening stage, variety and farm practices.	Researchers	Worldwide		IRTA	
22- 25 April 2009	Conference (poster presentation).  3rd International Congress on Food and Nutrition. Antalya, (Turkey). A. Ribas-Agustí, M. Castellari, M. Gratacós-Cubarsí, C. Sárraga, R. Gavarra, J. Arno and O. Alomar. Effect of Lobularia companion plant o lettuce crop protection and antioxidant content.	Researchers	Worldwide		IRTA	
27- 29 April 2009	Conference (poster presentation). 2nd SAFE Consortium	Researchers	Worldwide		IRTA	

Dissemination of Knowledge - YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
27- 29 April 2009	International Congress on Food Safety. Girona (Spain). Novel Technologies and Food Quality, Safety and Health. E. Fulladosa, A. Costa-Corredor, M. Garriga, J. Arnau and P. Gou*. Effect of salt reduction and k-lactate addition on safety of restructured drycured hams.  Conference (poster presentation).  2nd SAFE Consortium  International Congress on Food Safety. Girona (Spain). Novel Technologies and Food Quality, Safety and Health. A. Costa-Corredor, X. Serra, P. Gou and J. Arnau*. Restructured dry-cured hams with reduced salt and k-lactate addition: effects of the post-resting temperatures and the final weight loss.	Researchers	Worldwide		IRTA	
27- 29 April 2009	Conference (poster presentation).  2nd SAFE Consortium International Congress on Food Safety. Girona Spain). Novel Technologies and Food Quality,	Researchers	Worldwide		IRTA	

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
	Safety and Health. J. Comaposada, G. Ferrini, J. Arnau and P. Gou. The effect of high pressure process on colour for dry-cured meat at different water content.					
28 April 2009	Spanish Tecnological Platform Meeting	Industry and Research	Spain	21	FIAB	
28-30 April 2009	Course	Researchers and food industry	European countries	15	UGENT	
29 April 2009	6 Publications	scientists				
29 April 2009	18 Posters	scientists	France, Italy, Greece, Germany, Switzerland		INRA/ UL /TUM ISS	
		Austrian Bakery				
29 April 2009	Branch Conference	and Sweets Producers	Austria	35	FIAA	
28 April 2009	Seminar	General public	Czech Republic International:	80	ICT	
30 April 2009	Conference "Ease of Opening"	Members, researchers and the press	UK, USA, Norway, Sweden, Denmark	50	FI	
30 April 2009	Conference (oral presentation).	Industry and	Norway	30-40	MATFORSK	

Dissemination of Knowledge – YEAR 2008/2009						
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved	
	Den storen saltdagen. Oslo (Norway). M. Høy. Results from the TRUEFOOD project.	politics				
Every three months	flyers	Sector council ( TOBB Food/ Drinks)	Turkey	100	SETBIR	
Every 2 months emailing about TRUEFOOD project results	Direct e-mailing	Industry	France	150	ANIA	
Monthly	Direct e- mail	Industry ( meat & dairy sectors)	Turkey	180	SETBIR	
Monthly	Newsletter	Industry	Hungary	300	FHFI	
Every week	Direct phone- call	SMEs- Industry (meat & dairy sectors)	Turkey	180	SETBIR	
Regularly updated	Project web-page on the Federation's web-site	General public, Higher education, Research, Industry	Hungary	800	FHFI	
Frequently	Project web-site	General Public	Austria		FIAA	
Frequently	Flyers	Members of FIAA	Austria	300	FIAA	

Dissemination of Knowledge – YEAR 2008/2009								
Planned/ actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner Responsible/ involved			
At every training session	TRUEFOOD Flyers distribution	Industry	France	260	ANIA			

Dissemination of Ki	nowledge – YEAR 2009/	/2010			
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
July 2009	Poster: The impact of applying different innovations on the image of traditional foods in Europe	Research/Industry 8 <sup>th</sup> Pangborn Sensory Science Symposium, Italy	World-wide	900	IRTA, UGENT, Nofima Mat
July 2009	Poster: Consumer acceptance of nutritional innovations in traditional cheese.	Research/Industry 8 <sup>th</sup> Pangborn Sensory Science Symposium, Italy	World-wide	900	INRA
July 2009	Poster: Reducing salt content in dry cured ham: Are expected and sensory likings of French consumers congruent?	Research/Industry 8 <sup>th</sup> Pangborn Sensory Science Symposium, Italy	World-wide	900	INRA, Nofima Mat
July 2009	Poster: Consumer acceptance of dry-cured ham with different salt levels and different origin/brand	Research/Industry 8 <sup>th</sup> Pangborn Sensory Science Symposium, Italy	World-wide	900	PEGroup, Nofima Mat
July 2009	Poster: Appropriateness and valuation of traditional cheeses exposed to different	Research/Industry 8 <sup>th</sup> Pangborn Sensory Science Symposium, Italy	World-wide	900	Nofima Mat, INRA

Dissemination of Kn					
Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
Accepted June 2009	innovations – a study in France and Norway Publication: Perception of traditional food products in six European countries	Food Quality and Preference, 2010, 21, 225-233.	World-wide		All partners in WP1
Accepted fall 2009	using free word association. Publication: Polish consumers' perception of traditional food based on the	Food, Science, technology, Quality, Krakow, 2009, no3 (64), 95.	World-wide		SGGW
Accepted fall 2009	qualitative survey. Publications: Consumers' preferences reffering to applicable innovations in traditional products	Food, Science, technology, Quality, Krakow, 2009, no3 (64),115.	World-wide		SGGW
Accepted May 2009	Publication: Association between traditional food consumption and motives for food choice in six	Appetite, 2009, 52, 345-354.	World-wide		UGENT, IRTA, Nofima Mat

Dissemination of Kn	owledge – YEAR 2009,	/2010			
Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
Accepted December 2009	European countries. Publication: How do European consumers define the concept of Traditional Food? Evidence from a survey in six European countries.	Agribusiness, In press	World-wide		All partner in WP1
Accepted May 2009	Profile and projected image of traditional food consumers in Europe.	British Food Journal, In press	World-wide		UGENT, Nofima Mat
Accepted September 2009	Publication: Alternative methods for combining design variables and consumer preference with information about attitudes and demographics in conjoint analysis.	Food Quality and Preference, 2010, 21, 368-378.	World-wide		Nofima Mat
Resubmitted February 2010	Publication: Traditional food in Europe: general image and attributes	Food Quality and Preference	World-wide		Nofima Mat, UGENT

Dissemination of Kno					
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
Submitted February 2010	perception Publication: Innovation in traditional food products: Do sector innovation activities match consumers' acceptance?	Food Quality and Preference	World-wide		UGENT
Resubmitted April 2010	Publication: Are chain goals matching with consumer perceptions? The case of the traditional food sector in the EU.	Agribusiness	World-wide		UGENT
Submitted March 2010	Publication: Acceptance of innovations in dry cured ham by Norwegian consumers.	Food Quality and Preference	World-wide		Nofima Mat, UGENT and IRTA.
November 2009	Presentation: Consumer perception of Traditional food Products	TRUEFOOD seminar, Budapest, Hungary	Hungary	40	Nofima Mat
November 2009	Presentation:	TRUEFOOD	Hungary	40	Nofima Mat

Dissemination of Ki	Dissemination of Knowledge – YEAR 2009/2010					
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved	
	Consumers attitudes to innovations in Traditional Food Products	seminar, Budapest, Hungary				
November 2009	Presentation: Traditional Food – "steady or trendy"?	Seminar for Norwegian press, Oslo	Norway	30	Nofima Mat	
November/ December 2009	A total of 20 publicities/articles in newspapers/ websites based on the presentation above	General public and industry	Norway		Nofima Mat	
February 2010	Presentation: TRUEFOOD – examples of consumerstudies of cheese with reduced fat and healthy fatty acids.	Seminar for Norwegian authorities and industry	Norway	60	Nofima mat	
9-april-2010	10 Publications +5 submitted +13 in preparation	scientists				
9-april-2010	11 Posters	scientists	France, Italy, Greece, Germany, Switzerland	International congresses, (German, Italian and French congresses)	INRA, UL, , TUM ISS, ADIV	

Dissemination of Kn	owledge – YEAR 2009	/2010			
Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
April 2009	Oral presentation	scientists	Rennes (France )	4th IDF Dairy Science and Technology Week.	INRA
December 2009.	Innovation Cheese ripening EISIEL	Scientist, dairy industry	Paris (France).	60	INRA
June 2009	5 presentations in a confrence for microbial ecology in traditional cheese	Scientists, Cheese producer, cheese trade, trainers	Aurillac (France).	120	INRA, ISS
3 June 2009	Technical days For PDO cheeses producer	Technicians of the dairy industry	Aurillac (France)	100	INRA
March 2010.	NAGREF Scientific Bulletin,	Scientists, regulation, authorities Cheeses industry	Greece		NAGRF
April, 2010.	Univerza vLjubljani,	scientists	Ljubljana (Solvenie	50	LU
18/06/2009	Conference	Industry (Agro food and packaging sectors)	2 France	65	ACTIA/LNE
13 November 2009	Conference. Session d'information TRUEFOOD. Sécurité et qualité de la bière : innovations en 2009	Industry	Institut Meurice, Bruxelles	About 50 persons	University of Perugia

Dissemination of K	nowledge – YEAR 2009	/2010			
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
28.4.2009 2009	Title: Sécurité et qualité de la bière: l'HACCP est une obligation, c'est aussi une chance! seminar Publication in the scientific journal Czech Journal of Food Science	General public Higher education	Czech Republic All countries	80	ICT ICT
2009	Publication in the special journal Packaging.	General public	Czech Republic	}	ICT
2009	Publication in the special journal Packaging.	General public	Czech Republic	+	ICT
1315.5.2009	Poster in the International Conference Chemical Reactions in Foods VI	Higher education	The symposium participitants were from the whole world	350	ICT
46.11.2009	Poster in the 4th International Symposium on Recent Advances in Food Analysis	Higher education	The symposium participitants were from the whole world	950	ICT
2010	Publication in the scientific journal		All countries	-	ICT

Dissemination of Kn	owledge – YEAR 2009/	/2010			
Planned/actual Dates	Type	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
	3 Journal of Food and Nutrition Research.				
2010	Publication in the scientific journal Journal of Foof Engineering.		All countries	+	ICT
3.2.2010	Colloquium	Industry	Czech Republic	52	ICT/Federation of the Food and Drink Industries of the Czech Republic
November 4-6, 2009	Symposium (4 posters, 1 lecture)	government, research, industry, academic	all	400	ICT Prague
September 16 -18 2009	Conference (2 posters)	government, research, industry, academic	SK, CZ	110	ICT Prague
2010: January 14 and 27, February 9 and 17, March 8 and 16.	training, lectures	industry (SME)	CZ	37	ICT Prague
June 2009 April 2010 February 2010	Publication Publication Publication				AUA AUA AUA

Dissemination of Knowledge – YEAR 2009/2010						
Planned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved	
March 2010 May 2009	Publication Publication				AUA AUA	
8-12 September 2009	Conference	Research	International		AUA	
11-13 November 2009	Conference	Research	International		ССН	
11-13 November 2009	Conference	Research	International		CCH/ADRIA	
15 April 2010	Conference	Research	Hungary		ССН	
3 July 2009 21 September 2009	Info-Day Info-Day	General Public General Public	International Hungary	500 67	CCH CCH	
24 February 2010 19 March 2010	Training Training	SMEs SMES	Greece Greece	25 100	AUA/SEVT/ETAT AUA/SEVT/NAGR EF	
19 April 2010 16 June 2009 29 September 2009 18 February 2010	Training Training Training Training	SMEs SMEs Research, SMEs Food control institutes, SMEs	Greece Hungary UK Hungary	30 30 92 25	AUA/SEVT/ETAT CCH CCH CCH	
15-17 June 2009	Conference	Research and industrials	International	130	ADRIA/LUBEM/ technopole Quimper	
22 January 2010 4 March 2010	Training Training	SMEs SMEs	France Belgium	21 14	ANIA/ADRIA FEVIA/ADRIA	

Dissen	nination of K	nowledge – YEAR 2009/2	2010				
Pla	nned/actual Dates	Туре	Type of audience	Countries addressed	Size of aud	lience	Partner responsible /involved
26 Ma	rch 2010	$\mathcal{E}$	Academics SMEs	Turkey France	n/a 18		SETBIR/ADRIA ANIA/ADRIA
2009	F. Sympo Tournayre, Berdagué : Compounds Milk of Ex Tocopherol-	(Scientific journal). ura, A. Cornu*, P. T. Massouras, J.L. and B. Martin. Odor in Cheese made from the struded Linseed and α- Supplemented Cows. Dairy Science 2009, 92:		Worldwide		INRA	-2 WP4.1.1
2009	M. Gobert, Chilliard, B Bauchart a polyphenols E efficient lipoperoxida n-3 polyun	ntion in dairy cows given nsaturated fatty acids. Dairy Science 2009,		Worldwide		INRA	-2 WP4.1.1
2010	A.Ferlay, I	(Scientific journal).  3. Martin, S. Lerch, P. Y. Chilliard. Effects of		Worldwide		INRA	-2 WP4.1.1

Dissen	nination of Knowledge	– YEAR 2009/2	010			- <b>-</b>	
Plai	nned/actual Dates	Туре	Type of audience	e Countries addressed	Size of audience	Partner responsib /involved	le
	evening milking on	ided linseeds, extracts rich in morning vs. milk fatty acid Holstein and					
2010	Publication (Scientific Afseth NK, Martens I Narum B, Jørgensen A, Kohler A. Predic composition of milk of two FTIR sampling Submitted.	H, Giskehaug L, K, Lien S, Haug cting fatty acid - A comparison	Researchers	Worldwide	NOFI	MA-4 WP4.1	2
2010	Publication (Scientific M. Škrlep, M. Čan Kavar, B. Žlender, Gou, J. Arnau, Gouthwood, A. Diest Dutertre and V. Sa Association of PRKA genetic polymorphism interest in dry has comparative study in	dek-Potokar, T. M. Hortos, P. G. Evans, O. re, N. Robert, C. anté-Lhoutellier. AG3 and CAST ms with traits of am production:	Researchers	Worldwide	KIS-2 IRTA INRA GENV ABIC	10 2 US-33	2.1

Dissen	Dissemination of Knowledge - YEAR 2009/2010						
Plai	nned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved	
	France, Slovenia Livestock Science 20 60-66.	and Spain. 010: 128 (1-3):					
2010	Publication (Scientific M. Škrlep, S. Mande V. Santé-Lhoutellier, Čandek-Potokar. Gr value affects proteo dry-cured ham. Ital Animal Science. doi:10.4081/ijas.2010	lc, B. Javornik, P. Gou and M. reen ham pH mic profile of ian Journal of In press.	Researchers	Worldwide	KIS-2 IRTA- INRA	-10	
2010	Publication (Scientific M. Čandek-Potokar Dry ham ("Kraški prislosses as affected by properties and practice. Journal of Fand Preservation. Accepted.	and M. Škrlep.  šut") processing  y raw material  manufacturing	Researchers	Worldwide	KIS-2	0 WP4.2.1	
2010	Publication (Scientific M Škrlep, M Čand Sante-Lhoutellier, P C Dry-cured ham "	dek-Potokar, V Gou	Researchers	Worldwide	KIS-2 IRTA- INRA	-10	

Dissen	Dissemination of Knowledge – YEAR 2009/2010							
Pla	nned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved		
	seasoning losses of PRKAG3 and CAST partial of ani Submitted.	polymorphisms.						
2010	Publication (Scientifi M Škrlep; M Čan Mandelc; B Javorn Chambon; V S Proteomic profile of relative to PRKA genotype, level of sal Meat science. Submitted.	dek-Potokar; S tik; P Gou; C Sante-Lhoutellier dry-cured ham G3 or CAST	Researchers	Worldwide	KIS-2 IRTA INRA	-10		
2009	Publication (Scientific V.H. Segtnan*, M. and J.P. Wold. For analysis in salmon for contact near infrarimaging: A sampling strategy. Journal of Spectroscopy 2009, 2	Hoy, B. Narum at distributional cillets using non- tillets using non- tillets using non- ted interactance and calibration of Near Infrared	Researchers	Worldwide	NOFI	MA-4 WP4.2.2		
2009	Publication (Scientifi A.Costa-Corredor,		Researchers	Worldwide	IRTA	-10 WP4.2.3		

Dissen	Dissemination of Knowledge – YEAR 2009/2010							
Pla	nned/actual Dates	Type	Type of audience	Countries addressed		Partner responsible /involved		
	Arnau and P. Gou* NaCl content in recured hams: temperature and dryion physicochemical parameters. Meat Sci. 390-397.	structured dry- post-resting ing level effects and sensory						
2010	Publication (Scientific E. Fulladosa, E. Sar Picouet and P. Gou salt and water conter hams by computed Journal of Food Er 96: 80-85.	ntos-Garcés, P. . Prediction of nt in dry-cured d tomography.	Researchers	Worldwide	IRTA-	10 WP4.2.3		
2010	Publication (Technical A.Costa Corredor, Arnau. La reducción de sal en los produna necesidad y un 2010, 184: 156-184.	P.Gou and J.  del contenido  uctos cárnicos.	Agrifood	Spain	IRTA-	10 WP4.2.3		
2010	Publication (Scientific A. Costa, I. Muñoz, J	•	Researchers	Worldwide	IRTA-	10 WP4.2.3		

Dissen	nination of Knowl	ledge – YEAR 2009/2	010			ъ
Plar	nned/actual Dates	Type	Type of audience	e Countries addressed	d Size of audience	Partner responsible /involved
	pork meat brin	es and diffusivities in ne-salted with NaCl LWT-Food Science 2010.				
2010	and E. Fullade analysis of a <sub>w</sub> , so cured hams duri	és, P. Gou, J. Arnau osa. Non-destructive alt and water in dryng drying process by uputed tomography.	Researchers	Worldwide	IRTA	-10 WP4.2.3
2010	Castellari. An El Method to Quar Phenolic Com (Lycopersicon	R. Cáceres, M. sí, C. Sárraga & M. nhanced HPLC-DAD ntify Target Intact 1 apounds in Tomato esculentum Mill.) of Agricultural and	Researchers	Worldwide	IRTA	-10 WP4.3.1

Dissen	Dissemination of Knowledge – YEAR 2009/2010						
Pla	nned/actual Dates	Туре	Type of audience	Countries addressed	Size of audience	Partner responsible /involved	
2009	Publication (Scientif J. Doltra and P. M of nitrogen leaching crop rotation in a climate using the E Hydrus-2D model Water Managemen 277-285.	uñoz. Simulation from a fertigated Mediterranean U-Rotate_N and S. Agricultural	Researchers	Worldwide	IRTA	-10 WP4.3.2	
2010	Publication (Scientif M. Gratacós-Cuba Agustí, J.A. García-Castellari*. Simultar of Intact Gluco Phenolics Compour DAD-MS/MS in Branch L.var. Botrytis. F 2010, 121(1): 257-26	rsí, A. Ribas-Regueiro and M. neous Evaluation osinolates and nds by UPLC-rassica oleracea Food Chemistry	Researchers	Worldwide	IRTA	-10 WP4.3.2	
7 <sup>th</sup> – 8	organi Comm Czech Presen Sebők netwon	rch Connection Everence by the Europe hission in Prague, Republic. Itation made by A.: "Experiences on rking, European and technology	an policy make		50	ССН	

Dissemination of K					
Planned/actual Dates	Туре Тур	be of audience	Countries addressed	d Size of audience	Partner responsible /involved
	support on food research", where the concept of chain approach of innovation was included.				
13 <sup>th</sup> May 2009.	Review meeting on the applicability of four selected chain strategies and applicability of four selected innovative distribution strategies in Budapest, Hungary.	Food manufacturers	Hungary	6	ССН
25 <sup>th</sup> May 2009.	Regional meeting of the Hungarian National Food Technology Platform in Debrecen, Hungary A. Sebők: The concept of combining capabilities and resources along the supply chain, or with interdisciplinary areas to develop new core competencies was explained as a part of a major presentation.	Food manufacturers , researchers	Hungary	30	ССН
27-28 May 2009	Conference Kühne, B. and X. Gellynck. (2009) Innovation capacity of SME's in the brewery sector - a chain approach'.	Researchers and Food industry	International (incl. Australia, Europe and North- and South America)	~50	UGENT

Dissemination of K	Partner responsible				
Planned/actual Dates	Туре Т	Type of audience	Countries addressed	Size of audience	/involved
	Beeronomics Conference, Leuven, Belgium, May 27- 28, 2009	-			
3 <sup>rd</sup> June 2009	Campden Day UK in Chipping Campden, UK. a stand and a poster + 4 info sheets on WP5. A.Sebők; A.Hegyi: "WP5: Improve marketing and supply chai organisation methods for traditional food products".	- , retailers, policy d makers, n researchers	UK + Europe	over 500	ССН
16 <sup>th</sup> June 2009.	Seminar on "Tradition and Innovation: improving the marketabilit maintaining traditions" in Komárom, Hungary. A. Sebők: "Operation of traditional processed food chains and the innovative strategies for market access"; A. Hegyi; A. Papp Successful cases of using chain management and marketing management resources at SMEs producing traditional foods	p:	Hungary	30	CCH in close cooperation with FHFI
20 <sup>th</sup> – 23 <sup>rd</sup> June 2009	Conference 19 <sup>th</sup> Annual World Forum and Symposium of the	Researchers, food manufacturers	International	400	ССН

Dissemination of Kn					
Planned/actual Dates	Туре Тур	e of audience	Countries addressed	d Size of audience	Partner responsible /involved
	IAMA in Budapest, Hungary. Presentation made by A.Sebők: "Chain approach to improve market access of traditional food product of SMEs".	, retailers			
20-23 June 2009	Conference Van Lembergen, K., Molnár, A., Gellynck, X. (2009) "Relationship measures as indicators of chain performance: The case of the EU traditional food sector" paper presented at 19th Annual World Symposium International Food and Agribusiness Management Association (IAMA), 20- 21th, June, 2009, Budapest, Hungary	Researchers, Food industry and retailers	International	400	UGENT
June 2009	Review meeting on the applicability of four selected chain strategies and applicability of four selected innovative distribution strategies in Bolzano, Italy.	Food manufacturers	Italy	18	PEG
7 July to 31 August 2009	Input for the Blog of panel on Innovation Policy organised by the EC. A.	Policy makers	EU	>30	ССН

Dissemination of K					
Planned/actual Dates	Туре Тур	e of audience	Countries addressed	d Size of audience	Partner responsible /involved
08 <sup>th</sup> July 2009.	Sebők on behalf of Etp Food for Life: The concept of combining capabilities and resources along the supply chain, or with interdisciplinary areas to develop new core competencies was explained. Workshop/training on participation in research and innovation networks and FP7 in Debrecen, Hungary. The concept of chain collaboration was covered by A. Sebők.	Food manufacturers , researchers	Hungary	9	ССН
28 <sup>th</sup> August 2009	Seminar on "Quality oriented production in animal breeding" in Debrecen, Hungary. Presentation by A. Sebők; A.Hegyi: "Opportunities and benefits of application of chain approach in animal food chains".	Farmers, food manufacturers, researchers	<b>U J</b>	40	ССН
Summer 2009	Publication Molnár, A.,Gellynck, X. (2009), "Performance imbalances in the chain: EU traditional food sector".	Researchers	International	whole research community	UGENT

Dissemination of K					
Planned/actual Dates	Туре Тур	e of audience	Countries addressed	d Size of audience	Partner responsible /involved
03-06 September 2009	Apstract: Applied Studies In Agribusiness And Commerce, Issue 3-4 Conference UMIL participated at the 113th EAAE Seminar "A resilient European food industry and food chain in a challenging world", Chania, Crete, Greece, 03-06 September, 2009 – resulting in a conference paper: Banterle, A., Cavaliere, A., Stranieri, S. Carraresi, L., 2009. Marketing management capabilities and price setting: An empirical	Agricultural Economists	International	~ 150	UMIL
3-6 September 2009	analysis in the EU traditional food sector. Conference Molnár, A., Gellynck, X. (2009), "Imbalances of chain performance: the case of the traditional food sector in the EU" paper presented at 113th EAAE Seminar, 3-6th September, 2009, Chania, Greece	Agricultural Economists	International	~150	UGENT
18 September 2009	PhD-Seminar of the division	Researchers	Belgium and	12	UGENT

Dissemination of K					
Planned/actual Dates	Туре Тур	e of audience	Countries addressed	Size of audience	Partner responsible /involved
	of Agro-Food Marketing, in Langemark, Belgium		International (Philippines)		
21 <sup>st</sup> September 2009	Campden Day Hungary in Budapest, Hungary. A. Sebők: European trends of development and Hungarian opportunities in the food industry" based on the exploitation of opportunities in the chain approach of innovation + a stand exhibits, 4 info-sheets on WP 5 results.	Food manufacturers , mediators, policy makers	Hungary	77	ССН
21 <sup>st</sup> September 2009	Training course to SMEs  UMIL participated to the training course "The innovation of traditional food products: TRUEFOOD meets SMEs" ("Innovazione dei prodotti tradizionali: TRUEFOOD incontra le Piccole e Medie Imprese") directed to Italian SMEs organised by University of Milan in collaboration with Italian TDU, in Mantua. On behalf of UMIL, Laura Carraresi presented a	SMEs	Italy	~ 50	Federalimentare/U MIL

Dissemination of K					
Planned/actual Dates	Туре Тур	e of audience	Countries addresse	d Size of audience	Partner responsible /involved
September 2009	contribution "Elements of Marketing Management for SMEs" ("Elementi di Marketing Management per le Piccole e Medie Imprese alimentari") concerning the results of WP5.2 activity. Contact Person: Carraresi L. (laura.carraresi@unimi.it) Publication UMIL published following paper: Banterle, A., Cavaliere, A., Stranieri, S. Carraresi, L., 2009. European traditional food producers and marketing capabilities: An application of the marketing management process. Description: Applied Studies in Agribusiness and Commerce – APSTRACT,	Agricultural Economists	Europe	whole research community	UMIL
Autumn 2009	Vol. 3, issue 5-6, pp. 41-46. Publication Gellynck, X. and Molnár, A. (2009), "Chain governance structures: the European traditional food sector", British Food Journal, Vol.	Researchers	International	whole research community	UGENT

Dissemination of Ki	_				
Planned/actual Dates	Type T	ype of audience	Countries addressed	Size of audience	Partner responsible /involved
21 <sup>st</sup> October 2009.	111, No. 8, pp. 762 - 775. On a workshop on food labelling in Budapest, Hungary a presentation on the "Amalgamated definition of traditional foods based of consumers and chain members aspect" by A. Papp.		Hungary	97	CCH on the workshop organised by FHFI
23 October 2009	Training to SMEs  "Gestion stratégique des chaîneses alimentaires"  (Strategic management of food chains), in Paris, France	SMEs	France	2	UGENT / ANIA
12 <sup>th</sup> ·November 2009	Seminar in Budapest, Hungary on "Traditional foods, the market and the Consumers" on which a presentation on "Market access of traditional food products" was provided by A. Papp.	Food manufacturers	Hungary	28	CCH on the workshop organised by FHFI
23 <sup>rd</sup> November 2009	Joint Board and Mirror Group Meeting of the Hungarian National Food Technology Platform in Budapest, Hungary. A. Sebők: The concept of	Food manufacturers , mediators, policy makers, researchers	Hungary	25	ССН

Planned/actual Dates	Туре Ту	pe of audience	Countries addressed	Size of audience	Partner responsible /involved
26-27 November, 2009	combining capabilities and resources along the supply chain, or with interdisciplinary areas to develop new core competencies was explained Training to SMEs "Strategic management of food chains": This training war part of a Marketing Conference from the Hungarian Cooling and Canning Industry Association in Eger, Hungary. The training was	l. SMEs	Hungary	30	UGENT/ CCH
11 <sup>th</sup> December 2009	organized together with CCH. Review meeting of the Hungarian National Technology Platform at the national Funding Body in Budapest, Hungary. A. Sebők: The concept of combining capabilities and resources along the supply chain, or with interdisciplinary areas to develop new core competencies was explained	Policy makers, food manufacturers , researchers	<i>5 3</i>	25	ССН

Dissemination of K	nowledge – YEAR 2009/2010				
Planned/actual Dates	Туре Туре	e of audience	Countries addressed	Size of audience	Partner responsible /involved
December 2009	Input to the questionnaire of the EC working group of funding bodies, which developed recommendations to the European Commission on increasing SME participation in the KBBE-theme of FP7by A. Sebők on behalf of ETP Food for Life. The concept of combining capabilities and resources along the supply chain, or with interdisciplinary areas to develop new core competencies was explained.	Policy makers	EU	SMEs in Europe	ССН
28 <sup>th</sup> January 2010	Training course to SMEs UMIL participated to the training course directed to Italian SMEs organised by Italian TDU, in Naples. Alessandro Banterle and Laura Carraresi presented two contributions: "The Marketing Management in the food firms" (II Marketing Management nella gestione delle imprese alimentary), and "Resources and capabilities of SMEs in	SMEs	Italy	~ 50	Federalimentare/ UMIL

Planned/actual Dates	Туре Тур	be of audience	Countries addressed	d Size of audience	Partner responsible /involved
	the strategy development" ("Le risorse e le capacità delle PMI nella formulazione delle strategie"), respectively, concerning the results of WP5.2 activity. Contact Person: Carraresi L.				
29 January 2010	(laura.carraresi@unimi.it) Round-table discussion with SMEs, support organisations and researchers about the draft recommendations on results of whole WP5	SMEs, support organizations, knowledge providers	Belgium	12	UGENT
January-March 2010	Case-study interviews with SMEs	SMEs	Belgium	10	UGENT
2 <sup>nd</sup> February 2010.	Training Chipping Campden, UK. A. Sebők: Food chain approach to harmonise innovation, authenticity and improved market access of traditional foods Lessons learned from TRUEFOOD project.	Retailers, food manufacturers , researchers	UK	26	ССН
5 <sup>th</sup> February 2010.	A round table discussion on the recommendation on whole WP5 in Budapest, Hungary.	Food manufacturers , policy makers, retailers,	Hungary	60	CCH in close collaboration with FHFI

Dissemination of K					
Planned/actual Dates	Туре Тур	be of audience	Countries addressed	d Size of audience	Partner responsible /involved
8-12 February 2010	Conference UMIL participated at the 4th International European Forum on System Dynamics and Innovation in Food Networks, Innsbruck-Igls, Austria, 8-12 February, 2010 – resulting in a conference paper/oral presentation: Banterle, A., Cavaliere, A., Stranieri, S. Carraresi, L., 2010. The relationship between innovation and marketing in SMEs in the EU food sector.	economics and Food industry	International (incl. Australia, Europe and North- and South America)	~ 150	UMIL
8-12 Feb 2010	Conference Gellynck, B. Kühne and R.D. Weaver. (2010). Relationship quality and innovation capacity of chains: The case of the traditional food sector in the EU. 4th International European Forum on System Dynamics and Innovation in Food Networks, 8-12 Feb 2010, Igls, Austria	Researchers in agricultural economics and Food industry	Europe and North- and South America)	~150	UGENT
8-12 Feb 2010	Conference	Researchers	International	~150	UGENT

Dissemination of K					
Planned/actual Dates	Туре Тур	e of audience	Countries addressed	d Size of audience	Partner responsible /involved
	Kühne, B., Molnár, A., Gellynck, X. (2010) "Chain relationship quality determining innovation capacity and chain performance". 4th International European Forum on System Dynamics and Innovation in Food Networks, 8-12 Feb 2010, Igls, Austria	in agricultural economics and Food industry	(incl. Australia, Europe and North- and South America)		
8-12 Feb 2010	Conference Molnár, A., Gellynck, X., Weaver, R. (2010) "Why differences make a difference: an empirical study of chain performance imbalances in the traditional food sector in the EU" paper prepared for the 4th International European Forum on System Dynamics and Innovation in Food Networks, 8-12 Feb 2010, Igls, Austria	Researchers in agricultural economics and Food industry	International (incl. Australia, Europe and North- and South America)	~150	UGENT
12 March 2010	PhD-Seminar of the division of Agro-Food Marketing, in Ghent, Belgium	Researchers	Belgium	10	UGENT
15 March 2010	Round-table discussion with	SMEs,	Italy	6	UMIL/PEG

Dissemination of K					
Planned/actual Dates	Туре Тур	e of audience	Countries addressed	Size of audience	Partner responsible /involved
	SMEs, support organisations and researchers about the draft recommendations on results of whole WP5	support organizations, policy makers, knowledge providers			
22 <sup>nd</sup> March 2010	Dissemination Workshop UMIL organised, with the collaboration of a Italian TDU of Federalimentare, a dissemination workshop entitled "Market of traditional food products and health needs: which possible innovations?" ("Il mercato dei prodotti alimentari tradizionali e le esigenze salutistiche: quali possibili innovazioni?"). This workshop has been addressed to Italian SMEs and academic people in order to disseminate the results of the TRUEFOOD project. The workshop has been held in Milan on 22nd March 2010, at the Faculty of Agriculture of University of Milan, and concerned the	SMEs and Academic people	Italy	~ 170	UMIL/Federalimentare

Dissemination of K					
Planned/actual Dates	Туре Т	ype of audience	Countries addressed	Size of audience	Partner responsible /involved
	following topics: consumer preferences, nutritional and health claims, marketing management, and the general situation of food market.				
25 <sup>th</sup> March 2010	Training course to SMEs UMIL participated to the training course "Elements of law, marketing and management to better sell the good taste" ("Elementi Diritto, Marketing e Management per vendere bene il buono") directed to Italian SMEs organised by Italian TDU, in Reggio Calabria. On behalf of UMIL, Laura Carraresi presented a contribution "Marketing in the management of SMEs" ("I marketing management nel gestione delle imprese alimentari") concerning the results of WP5.2 activity. Contact Person: Carraresi I (laura.carraresi@unimi.it)	di I la	Italy	~ 50	Federalimentare/U MIL

Planned/actual Dates	Туре Тур	e of audience	Countries addressed	Size of audience	Partner responsible /involved
31 <sup>st</sup> March 2010.	Conference on "Food Legislation and market access, the implementation of the EU legislation and the representation of the interest of SMEs" in Budapest, Hungary, where presentations were made on "Recommended distribution strategies of chains" by A. Papp and on the "Inventory of successful practices using food chain management and marketing management resource" by A. Hegyi.	Food manufacturers	Hungary	•	CCH on the workshop organised by FHFI
March 2010	Publication UMIL published following paper: Banterle, A., Carraresi, L., Stranieri, S., 2010. Small business marketing capabilities in the food sector: the case of Belgium, Hungary and Italy. Description: International Journal on Food System Dynamics, Vol. 1, n. 2, forthcoming.	Agricultural Economists		whole research community	UMIL

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<sup>\*</sup> Size of audience was not available at moment of preparation of this document

Dissemination of Ka Planned/actual Dates	nowledge – YEAR 2009/2010  Type Type	e of audience	Countries addressed	Size of audience	Partner responsible /involved
13 April 2010	Final TRUEFOOD Conference "New roots for traditional european food: Possibilities for succdess and sustainability" in Brussels, Belgium, Xavier Gellynck will present "Improve market access through innovative chain management" based on the results and recommendations of work package 5 of the TRUEFOOD project	Project partners, Researchers, SMEs and more agrifood industry	1	- 150	UGENT / CCH/ UMIL / PEG
15 <sup>th</sup> April 2010.	Hungarian final TRUEFOOD Conference will be held on the results of the TRUEFOOD project in Budapest, Hungary. Presentation by A. Sebők; A. Hegyi; A. Papp on TRUEFOOD WP 5 results.	Food manufacturers , policy makers, mediators, researchers	Hungary *		CCH on the workshop organised by FHFI
26-28th May 2010	Conference Banterle, A., Carraresi, L., Stranieri, S., 2010. Marketing management capabilities of food SMEs: an application in Italy Description: Conference	Researchers and Food industry	International	-250	UMIL

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<sup>\*</sup> Size of audience was not available at moment of preparation of this document

Dissemination of K					
Planned/actual Dates	Туре Тур	e of audience	Countries addresse	d Size of audience	Partner responsible /involved
26 - 28 May 2010	paper Venue: paper accepted for presentation at 9th Wageningen International Conference on Chain and Network Management, Wageningen, The Netherlands, 26-28th May 2010. Conference Molnár, A., Gellynck, X., Weaver, R. (2010) "The influence of chain relationship on chain performance: the case of the traditional food sector in selected European countries" paper prepared for the 9th Wageningen International Conference on Chain and Network Management, 26 May - 28 May 2010, Wageningen, The Netherlands (Pre-selected for the Best Paper Competition)	Researchers and Food industry	International	~ 250	UGENT
May 2010	Publication Gellynck, X., B. Kühne, and R.D. Weaver. (forthcoming)	Agricultural Economists	International	whole research community	UGENT

Dissemination of K					
Planned/actual Dates	Туре Тур	pe of audience	Countries addressed	d Size of audience	Partner responsible /involved
June 2010	Innovation capacity of food chains: A novel approach. International Journal of Innovation and Rural Development. (Accepted Nov 2009) Publication together with WP1 Kühne, B., F. Vanhonacker, X. Gellynck, and W.	Agricultural economist and consumer scientists	International	whole research community	UGENT
	Verbeke, (2010). Innovation in traditional food products: Do sector innovation activities match consumers' acceptance? Submitted to Food quality and preference. (Accepted for publication 2 <sup>nd</sup> April 2010).				
June 2010	Publication Kühne, B. and X. Gellynck. Breweries' innovation capacity measured by using a chain approach. Submitted to Journal of Wine Economics – Special issue on Beeronomics. (under revision).	Agricultural Economists	International	whole research community	UGENT
02-05 August 2010	Conference Banterle, A., Carraresi, L.,	Small Business	Europe	< 100	UMIL

Dissemination of Ki	Dissemination of Knowledge - YEAR 2009/2010					
Planned/actual Dates	Туре Тур	be of audience	Countries addresse	d Size of audience	Partner responsible /involved	
	2010. Food SMEs facing vertical competition with retailers: Marketing management capabilities as tools to be price maker Description: Conference paper Venue: paper accepted for presentation at 7th Annual International Conference on Small and Medium Sized Enterprises: Management – Marketing – Economic and Social Aspects, Athens, Greece, 02-05 August 2010.	Economists				
Summer 2010	Publication Gellynck, X., Banterle, A., Kühne, B., Carraresi, L., Stranieri, S. Market orientation and marketing management of traditional food producers in the EU. (waiting for approval of revision).	Agricultural Economists	International	whole research community	UGENT/UMIL	
6.1.3 - 5th of May 2009 at ADIV pilot plant (Clermont- Ferrand – France)	Demonstration session consisting in tasting 3 meat products produced with 2 strains of Lacto Bacillus inhibiting Listeria	5 French agro-food industry manufacturers	France	5 French agro-food industry manufacturers	ADIV – Third party of ACTIA	

Dissemination of Knowledge – YEAR 2009/2010					
Planned/actual Dates	Туре Ту	pe of audience	Countries addressed	d Size of audience	Partner responsible /involved
6.1.8 -24th February 2010 at IRTA (Monells – Spain)	monocytogenes Demonstration session of proposed strategies to industries for reduction and substitution of salt in hams	15 hams manufacturers and producers	Belgium, China, France, Italy and Spain	15 hams producers	IRTA
6.1.8 -25th February 2010 at IRTA (Monells – Spain)	Demonstration session of proposed strategies to industries for reduction and substitution of salt in hams	34 hams manufacturers and producers	France and Spain	34 hams producers	IRTA
6.1.8 -24th March 2010 at IRTA (Monells – Spain)	Demonstration session of proposed strategies to industries for reduction and substitution of salt in hams	15 hams manufacturers and producers	Hungary and Spain	15 hams producers	IRTA
May 2009	Conference Gis Alpes du Nord Chambery (France)	Industry (cheese sector)	France	12	INRA
July 2009	Publications Universities of Florence and Pisa (Italy)	Research	Italy	9	INRA
February 2010	Training course Unesco Paris (France)	Higher education	France	21	INRA
March 2010	Conference Conseil Général du Développement Rabat (Morocco)	Professional and administration	Morocco	56	INRA
April 2010	Conference GIS SYAL	Research	France	17	INRA
April 2008- October 2009	Publications	Research	International	450 hard copies, online	UL

Dissemination of K					
Planned/actual Dates	Туре	Type of audience	Countries addresse	d Size of audience	Partner responsible /involved
April 2010	Publications	Research	International	450 hard copies, online	UL
April 2010	Publications	Research	International	450 hard copies, online	UL
February 2010	Direct e-mailing	Governmental	Slovenia	Government office for growth.	UL
February 2010	Direct e-mailing	Governmental	European union	Green procurement officials.	UL
February 2010	Direct e-mailing	Food industry	European union	European Food SCP Roundtable.	UL
February 2010	Direct e-mailing	ILCD	European union	Data will be available online.	UL
4-9 October 2009	19th International Congre of Nutrition	ess Higher education Research Institute and University, Food Companies	Thailand	5000	INRAN
10-12 December 2009	XXXIV Congresso Nazionale SINU "Nutrizione, la pietra d'angolo. Fabbisogni nutrizionali e salute nell'epoca del genoma."	Higher education Research Institute and University, Food Companies	Italy	1000	INRAN
7-11 December	COST 863 Euroberry	Higher	UK	2000	INRAN

Dissemination of Knowledge - YEAR 2009/2010					
Planned/actual Dates	Туре Тур	e of audience	Countries addresse	d Size of audience	Partner responsible /involved
2009	WG4 Meeting in The 4th International Conference on Polyphenols and Health (ICPH2009)	education Research Institute and University, Food Companies			
19 March, 1 April, 16 April 2010	Training courses within the National Health Service	Health professionals	Italy	100	INRAN
14th May 2009	Workshop	Research Political bodies Agribusiness and food industry companies (SME) Industry interest groups	Germany	150	FW
May 2010	Website FW	General public	International	?	FW
June 2010	Publications in industry- oriented journals	Industry	European	?	FW
July 2010	Publication in scientific journal	Research Industry	International	?	FW

Dissemination of Knowledge – YEAR 2009/2010					
Planned/actual Dates	Type T	ype of audience	Countries addresse	ed Size of audience	Partner responsible /involved
August 2010	Internal seminar	Higher education Higher education Research	Germany	30	FW
June 2009	Press release(press/radio/TV) on TRUEFOOD conference at SERI (Salon européen de la Recherche et de l'Innovatio 2009)	ı	France	Specialized press	ANIA
June 2009	SERI Exhibition	Industry	Frances and all participating countries	4000 visitors potentially informed	ANIA
June, October, December 2009 - January and march 2010	Publications about TRUEFOOD events, result trainings in ANIA's flash	Industry, s, institution	France / Belgium	4500 recipients	ANIA
All period	Project web-site www.ania-recherche.net	General / professional publics	France / Belgium	6000 connections /months	ANIA
At every regional Food For Life France meeting	TRUEFOOD Flyers distribution	industry	France	180 companies	ANIA
At every training session	TRUEFOOD Flyers distribution	industry	France	350 companies	ANIA
Every 2 months emailing about	Direct e-mailing	industry	France	350 companies	ANIA

Dissemination of Knowledge – YEAR 2009/2010					
Planned/actual Dates	Туре Туре	e of audience	Countries addresse	d Size of audience	Partner responsible /involved
TRUEFOOD project results TRUEFOOD VIDEO showed at every ANIA's big event (conference,	Film/video	Industry and press	France	1500 companies	ANIA
) 4th May 2009	Brochure distribution and project presentation to Unione Industriali di Napoli	SMEs	Italy (Naples)	30	TDU FED
6th May 2009	Brochure distribution Fondazione COCA COLA "Il recupero degli imballaggi nel settore bevande analcoliche	SMEs, Research centre, Universities, Industry	Italy	80	FED
28 May 2009	Brochure distribution and project presentation to Associazione degli Industriali di Novara	SMEs	Novara (Italy)	20\	TDU FED
11th June 2009	Brochure and leaflet distribution to Convegno sulla funzionalità del cibo	SMEs, Research centre, Universities, Industry	Milan (Italy)	100	FED
11th June 2009	Brochure distribution and project presentation to Confinduatria Bari	SMEs, Research centre, Universities, Industry	Bari (Italy)	30	TDU FED

Dissemination of Kanned/actual Dates	nowledge – YEAR 2009/2010 Type T	ype of audience	Countries addressed	d Size of audience	Partner responsible /involved
17th June 2009	Brochure distribution and project presentation to TIS Innovation Park of Bolzano	SMEs, Research centre, Universities, Industry	Bolzano (Italy)	30	TDU FED
18th June 2009	Project presentation and brochure distribution to Workshop for EU-Latin American Industry- Academia "Best practices and barriers for food industry-academia cooperation"	SMEs, Research centre, Universities, Industry	Helsinki	100	FED
1st-2nd June 2009	Presentation of the project during the Kick off meeting of the Basefood Project	Research centre, Universities	Istanbul	30	TDU FED
18th June 2009	Project presentation and brochure distribution to Launch of the National Technology Platform Food for Life Switzerland	SMEs, Research centre, Universities, Industry	BEA-EXPO Berne	100	FED
21th September 2009	Project presentation and brochure distribution to Confindustria Mantova	SMEs, Research centre, Universities, Industry	Mantova (Italy)	30	TDU FED
11th September 2009	Brochure distribution "L'Industria alimentare e le sfide di medio periodo"	SMEs,	Italy (Florence)	35	FED

Dissemination of Knowledge – YEAR 2009/2010					
Planned/actual Dates	Туре Тур	e of audience	Countries addressed	d Size of audience	Partner responsible /involved
29th September 2009	Project dissemination and brochure distribution	Universities, Industry SMEs, Research	Italy AITB – Associazione	40	FED
2009	Dalla crisi allo sviluppo. cnel: le sfide dell'industria alimentare	centre, Universities, Industry	Tecnici Birrai		
25th September 2009	Project presentation Final meeting Alimenform	Stakeholders	Italy	20	TDU FED
2nd October 2009	Project presentation Meeting of NTPs	Stakeholders	Riga	120**CRI	FED
29th October 2009	Project presentation during the second Basefood project meeting	SMEs, Research centre, Universities, Industry	Plovdiv (Bulgaria)	30	TDU FED
29th October 2009	Infoday in occasion of the student prize TROPHELIA	SMEs, Research centre, Universities, Industry	Parma (Italy)	150	TDU FED
3th November 2009	Brochure distribution at Conference "Diet, nutrition and health in the etp "food for life"	SMEs, Research centre, Universities, Industry	Italy (CIISCAM conference Parma)	50	FED
11th December 2009	Project dissemination and brochure distribution to Confindustria Bari	SMEs, Research centre,	Bari (Italy)	25	TDU FED

Dissemination of Knowledge – YEAR 2009/2010					
Planned/actual Dates	Туре Ту	pe of audience	Countries addresse	d Size of audience	Partner responsible /involved
		Universities,			
25th January 2010	TRUEFOOD Infoday to Unione Industriali del Nord Sardegna (SS)	Industry 100 I	Italy	120	TDU FED
26th January 2010	Article published on the newspaper "Cronaca di Sassari"	General public	Sassari (Italy)	500	TDU FED
28th January 2010	Project dissemination and brochure distribution to Unione Industriali Napoli	SMEs, Research centre, Universities, Industry	Naples (Italy)	25	TDU FED
2nd February 2010	Project dissemination and brochure distribution to Unione Industriali Udine	SMEs, Research centre, Universities, Industry	Udine (Italy)	25	TDU FED
9th March 2010	Project presentation and brochure distribution	Press and Media	Istanbul (Turkey)	50	FED
22nd March 2010	Project presentation and brochure distribution at University of Milan "Il mercato dei prodotti alimentari tradizionali e le esigenze salutistiche: quali possibili innovazioni?"	SMEs, Research centre, Universities, Industry	Milan (Italy)	100	TDU FED
25th March 2010	Project presentation and	SMEs,	Reggio	30	TDU FED

Dissemination of Knowledge – YEAR 2009/2010					
Planned/actual Dates	Туре Тур	pe of audience	Countries addressed	Size of audience	Partner responsible /involved
	brochure dissemination at Confindustria Reggio Calabria "Elementi di Diritto,Marketing e Management per vendere bene il buono"	Research centre, Universities, Industry	Calabria (Italy)		
13th April 2010	Project presentation	Press, Media, SMEs and other stakeholders	Bruxelles (Belgium)	150	FED
29th April 2010	Project presentation and brochure dissemination at UnioneIndustriali of Treviso	SMEs and other stakeholders	Treviso	30	TDU FED
January 2009 – March 2010	E-newsletter Fevia-Flash: announcement of TRUEFOOD activities	Industry (all food sectors), stakeholders, research centres	Belgium	2.800-3.200  Total: 20 articles Average: ±2 articles every month	WP8 TDU FEVIA
January 2009 – March 2010	Direct e-mailing: announcement of TRUEFOOD activities	Industry (all food sectors), stakeholders, research centres	Belgium	Up to 500  Total: 29 mailings Average: 2 mailings every month	WP8 TDU FEVIA
January 2009 – March 2010	Direct e-mailing and e- newsletters: announcement of TRUEFOOD activities	Industry (all food sectors), stakeholders, research	Belgium	Up to 1.900  Total: 13 mailings  Average: 1 mailing	Flanders'FOOD WagrALIM

Dissemination of Knowledge – YEAR 2009/2010					
Planned/actual Dates	Туре Тур	oe of audience	Countries addressed	d Size of audience	Partner responsible /involved
January 2009 – March 2010	Direct e-mailing and e- newsletters: announcement of TRUEFOOD scientific results (info-sheets, translations of info-sheets, synthesis of "project news", surveys)	centres Industry (all food sectors), stakeholders, research centres, universities	Belgium	every month Up to 3.200 Total: 34 actions Average: 3 actions every month	WP8 TDU FEVIA Flanders'FOOD WagrALIM A few stakeholders
January 2009 – March 2010	Dissemination by stakeholders and intermediates: announcement of TRUEFOOD activities	Industry (all food sectors), stakeholders, research centres	Belgium	Up to 7.500  Minimum: 34 actions Average: 3 actions every month	WP8 TDU FEVIA c/o 20 stakeholders and intermediates and SME's WEEK (UE campaign)
January 2009 – March 2010	Dissemination of TRUEFOOD flyers and documentation (hard copies)	Industry (all food sectors), stakeholders, research centres, media	Belgium	Up to 75 sets per action or event 19 actions / events	Flanders'FOOD WagrALIM WP8 TDU FEVIA
November 2009	Publication : Annual Report of FEVIA	Industry (all food sectors), government, research centres and other stakeholders (other industries, retail)	Belgium	1.000 (printed version)	FEVIA

Dissemination of K					
Planned/actual Dates	Туре Тур	e of audience	Countries addresse	d Size of audience	Partner responsible /involved
May 2009	Publication: Annual Report of Flanders' FOOD	Industry (all food sectors), government, research centres and other stakeholders (other industries, retail)	Belgium	± 300 paper versions (also electronic version on website of Flanders' FOOD)	Flanders' FOOD
January 2009 – March 2010	Visits: description of the TRUEFOOD project	Industry (all food sectors), stakeholders, research centres	Belgium	± 7 SMEs + 1 research centre in 6 visits/meetings Average : 1 visit/meeting every 2 months	WP8 TDU FEVIA
January 2009 – March 2010	Update of web pages on www.fevia.be	Industry (all food sectors), stakeholders	Belgium Europe	±8.500 / month  Total :3 updates	WP8 TDU FEVIA
January 2009 – March 2010	Update of web pages on www.fevia-pme.be (French) and www.fevia-kmo.be	SMEs (all food sectors)	Belgium	±500 / month  Total :3 updates	WP8 TDU FEVIA
January 2009 – March 2010	(Flemish)  Update of web pages on www.flandersfood.com	Industry (all food sectors), research centres,	Belgium Europe	Average: 1 update every 4 months ± 2.000 / month Total: 5 updates Average: 1 update	Flanders'FOOD

Туре Т	Type of audience	Countries addressed	Size of audience	Partner responsible /involved
Update of web pages on www.wagralim.be and	Industry (all food sectors),	Belgium Europe	±1.000 / month	WagrALIM Cluster Nutrition
www.clusternutrition.be	research centres,		Average: 2 updates	
Talk – international conference on Logistics in Wallonia		Belgium	30	WP5 UGent WP8 TDU FEVIA
Talk – international workshop on Nutrisens	SMEs, stakeholders, research centres, academia	Belgium	75	WP8 TDU FEVIA
Talk –seminar on dairy products	SMEs, stakeholders, research centres	Belgium	30	WP8 TDU FEVIA
Publication of training activities in IFP-IPV catalogue	Industry (all food sectors), students, unemployed	Belgium	Unknown	IFP-IPV (Belgium) c/o WP8 TDU FEVIA
Press release in Zuivelzich (press)		Belgium	1	Flanders' FOOD
	sst SMEs, Industry (all sectors), research	Belgium France Spain	170	WP8 TDU FEVIA WP8 TDU ANIA WP8 TDU SPAIN
	Update of web pages on www.wagralim.be and www.clusternutrition.be  Talk – international conference on Logistics in Wallonia Talk – international workshop on Nutrisens  Talk –seminar on dairy products  Publication of training activities in IFP-IPV catalogue  Press release in Zuivelzich (press) Press article in Cluster We (e-newsletter "Made in	Update of web pages on www.wagralim.be and www.clusternutrition.be  Talk – international conference on Logistics in Wallonia Talk – international symbol stakeholders, general public SMEs, stakeholders, research centres, academia Talk – seminar on dairy products  Talk – seminar on dairy products  Talk – seminar on dairy products  Talk – seminar on dairy products  Talk – seminar on dairy products  Talk – seminar on dairy stakeholders, research centres, academia SMEs, stakeholders, research centres Industry (all food sectors), students, unemployed people Press release in Zuivelzicht (press) Press article in Cluster West (e-newsletter "Made in West") n°192  SMEs, SMEs, Industry (all sectors),	Update of web pages on www.wagralim.be and food sectors), Europe  Talk – international conference on Logistics in Wallonia general public  Talk – international SMEs, Belgium stakeholders, general public  Talk – international SMEs, Belgium stakeholders, research centres, academia  Workshop on Nutrisens stakeholders, research centres, academia  Talk – seminar on dairy SMEs, Belgium stakeholders, research centres  Industry (all Belgium stakeholders, research centres  Industry (all Belgium stakeholders, research centres  Publication of training activities in IFP-IPV food sectors), students, unemployed people  Press release in Zuivelzicht (press)  Press article in Cluster West (e-newsletter "Made in West") n°192 sectors), Spain	Update of web pages on www.wagralim.be and food sectors), Europe  Total :24 updates Average : 2 updates per month  Talk – international conference on Logistics in Wallonia general public  Talk – international SMEs, Belgium 30  Talk – international SMEs, Belgium 75  Wallonia general public  Talk – international SMEs, Belgium 75  workshop on Nutrisens stakeholders, research centres, academia SMEs, Belgium 30  Talk – seminar on dairy products stakeholders, research centres  Publication of training activities in IFP-IPV food sectors), students, unemployed people  Press release in Zuivelzicht (press)  Press article in Cluster West (e-newsletter "Made in West") n°192  Belgium 170  West") n°192  Every 3 months ±1.000 / month Europe  Total :24 updates Average : 2 updates per month 30  Total :24 updates Average : 2 updates per month 30  Total :24 updates Average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates average : 2 updates per month 30  Total :24 updates per month 30  Total :24 updates per month 30  Total :24 updates per month 30  Total :24 updates per month set per month set per month set per month set per month set per month set per month set per mo

Dissemination of K					
Planned/actual Dates	Type Type	e of audience	Countries addressed	d Size of audience	Partner responsible /involved
October 2009	Press article from Cluster West (e-newsletter "Made in West") n°193	centres, stakeholders, general public, consumers SMEs, Industry (all sectors), research centres, stakeholders, general public,	Belgium France Spain	170	Cluster West
January 2009 – April 2010	TRUEFOOD logo on partner website	consumers General public,	Belgium Europe	±1.000 visitors /	AUDA c/o WP8 TDU
1	www.jambondardenne.eu	consumers, suppliers	1		FEVIA
January 2009 – April 2010	Flyers on Ardenne Ham – with TRUEFOOD logo as partner	General public, local tourism	Wallonia	50.000 hard copies	AUDA c/o WP8 TDU FEVIA
February 2009 + December 2009 (replay)	Press release from TV La Une, RTBF, on WagrALIM and one TRUEFOOD training activity	Industry (all sectors), economical stakeholders, general public, students	Belgium Europe	Unknown	La Une, RTBF c/o WagrALIM WP8 TDU FEVIA
March 2009-April	Publications and website on	Industry (all	Belgium	Unknown	European initiative

Dissemination of K					
Planned/actual Dates	Туре Тур	e of audience	Countries addresse	d Size of audience	Partner responsible /involved
2009	two TRUEFOOD training activities in catalogue "First SMEs European week"	sectors), in particular SMEs, stakeholders, government, students, unemployed people	Europe		"First SMEs week" c/o WagrALIM WP8 TDU FEVIA
June 2009 – April 2010	TROPHELIA competition: e-mailing, telephone calls, meetings, update of webpages  CONFERENCES/ MEETINGS/ WORKSHOPS/one day TRAININGS:	Students	Belgium	500 academic departments 16 actions	WP8 TDU FEVIA with support of Flanders' FOOD, WagrALIM, AST
8/1/2009	Executive Committee	Members	CR, FFDI's premises, Prague	Members, 14	PK ČR
22/1/2009	Meeting of WG for Frozen Food Products	Members	CR, FFDI's premises, Prague	Members, 23	PK ČR
4/2/2009	WG for BIO Foodstuffs	Members	CR, FFDI's premises, Prague	Members, 25	PK ČR
5/2/2009	Meeting of WG for Trade Policy & Marketing	Members	CR, FFDI's premises, Prague	Members, 16	PK ČR

Planned/actual Dates	nowledge – YEAR 2009/2010  Type Ty	pe of audience	Countries addressed	d Size of audience	Partner responsible /involved
11/2/2009	Executive Committee	Members	CR, hotel SEN, Senohraby	Members, 8	PK ČR
12/2/2009	CTP - Steering Committee	Members	CR, FFDI's premises, Prague	Members, 17	PK ČR, ICT
12/2/2009	Science and Research Committee	Members	CR, FFDI's premises, Prague	Members, 42	PK ČR
17/2/2009	Environmental Affairs Committee	Members		Members, 31	PK ČR
18/2/2009	Meeting of WG for Healthy Lifestyle	Members	CR, FFDI's premises, Prague	Members, 35	PK ČR
18/2/2009	Meeting of WG for Bakery's production	s Members		Members, 35	PK ČR
23/2/2009	CTP - WG for Alcohol	Members		Members, 11	PK ČR
25/2/2009	Legislation Committee	Members	CR, FFDI's premises, Prague	Members, 35	PK ČR
6/3/2009	Training: standard for agricultural production – GlobalGAP.	Members, non-members	CR	64	PK ČR, ICT, IAEI
11/3/2009	Science and Research Committee	Members	CR, FFDI's premises, Prague	Members, 43	PK ČR

Dissemination of K					
Planned/actual Dates	Туре	Гуре of audience	Countries addressed	d Size of audience	Partner responsible /involved
19/3/2009	Executive Committee	Members	CR, hotel Artemis, Prague	Members, 8	PK ČR
19/3/2009	Board of Companies Directors	Members	•	Members, 42	PK ČR
19/3/2009	Supervisory Board	Members	CR, FFDI's premises, Prague	Members, 5	PK ČR
20/3/2009	Training: HACCP in food chain.	Members, non-members	CR	54	PK ČR, ICT, IAEI
27/3/2009	Training: manager of food safety (ISO 22000, BRC, IFS).	Members, non-members	CR	51	PK ČR, ICT, IAEI
1/4/2009	WG for BIO Foodstuffs	Members	CR, FFDI's premises, Prague	Members, 28	PK ČR
2/4/2009	Meeting of WG for Frozer Food Products	n Members	CR, FFDI's premises, Prague	Members, 19	PK ČR
9 – 10/4/2009	Training: manager of food safety.	Members, non-members	CR	50	PK ČR, ICT, IAEI
15/4/2009	Meeting for WG for Healt Lifestyle	hy Members	CR, FFDI's premises, Prague	Members, 11	PK ČR
15/4/2009	Science and Research Committee	Members		Members, 10	PK ČR
15/4/2009	CTP – Steering Committe	e Members and	CR, FFDI's	Members and non-	PK CŘ

Dissemination of K					
Planned/actual Dates	Type T	ype of audience	Countries addresses	d Size of audience	Partner responsible /involved
		non-members	premises, Prague	members, 11	
23 – 24/4/2009	Training: sustainability and audit of HACCP.	Members, non-members	CR	44	PK ČR, ICT, IAEI
5/5/2009	Plenary meeting of Czech Technology Platform for Foodstuffs	Members	CR, Kaiserštejn´s Palace	45	PK ČR
6/5/2009	CTP - Meeting for WG for Healthy Lifestyle	Members	The National Institute of Public Health, Brno	Members	PK ČR
18/5/2009	Meeting of Directors of Sector Associations	Members	CR, FFDI's premises, Prague	17	PK ČR
20/5/2009	Science and Research Committee	Members	CR, FFDI's premises, Prague	Members, 11	PK ČR
20/5/2009	Meeting of WG for Bakery production	's Members	CR, FFDI's premises, Prague	Members, 14	PK ČR
20/5/2009	Legislation Committee	Members	CR, FFDI's premises, Prague	Members, 29	PK ČR
21/5/2009	Board of Companies Directors	Members	CR, Cukrovary a lihovary TTD, a.s., Mladá Boleslav	Members, 45	PK ČR
22/5/2009	Training: preparation of entrepreneurial subjects for	Members, non-members	CR	84	PK ČR, ICT, IAEI

Planned/actual Dates	Туре Т	ype of audience	Countries addressed	d Size of audience	Partner responsible /involved
	certification according to BRC and IFC's standards.				
28/5/2009	General Assembley	Members, non-members	CR	74	PK ČR
29/5/2009	Training: audit of food safety system.	Members, non-members	CR	69	PK ČR, ICT, IAEI
4/6/2009	WG for BIO Foodstuffs	Members	CR, FFDI's premises, Prague	Members, 16	PK ČR
25/6/2009	Executive Committee	Members	CR, FFDI's premises, Prague	Members, 11	PK ČR
26/6/2009	Training: optimalization of procedures to systems of quality management, based on risk analysis.	non-members		71	PK ČR, ICT, IAEI
1/7/2009	Meeting for WG for Health Lifestyle	ny Members	CR, FFDI's premises, Prague	Members, 17	PK ČR
29/7/2009	WG for Milk Products	Members	CR, FFDI's premises, Prague	Members, 10	PK ČR
6/8/2009	WG for BIO Foodstuffs	Members	CR, FFDI's premises, Prague	Members, 21	PK ČR
12/8/2009	Meeting for WG for Health Lifestyle	ny Members	CR, FFDI's premises, Prague	Members, 19	PK ČR

Planned/actual Dates	nowledge – YEAR 2009/2010 Type Ty	ype of audience	Countries addressed	d Size of audience	Partner responsible /involved
3/9/2009	WG for Milk Products	Members	CR, FFDI's premises, Prague	Members, 8	PK ČR
9/9/2009	Meeting of WG for Bakery production	's Members	CR, FFDI's premises, Prague	Members, 13	PK ČR
9/9/2009	Legislation Committee	Members	CR, FFDI's premises, Prague	Members, 26	PK ČR
10/9/2009	Science and Research Committee	Members	CR, FFDI's premises, Prague	Members, 13	PK ČR
17/9/2009	Meeting of WG for Frozen Food Products	Members	CR, FFDI's premises, Prague	Members, 24	PK ČR
22/9/2009	CTP - WG for Milk	Members and non-members	CR, FFDI´s	Members and non- members, 8	PK CŘ
22/9/2009	CTP – Steering Committee	Members and non-members	CR, FFDI's	Members and non- members, 13	PK CŘ
24/9/2009	Board of Companies Directors	Members	CR, Olympik Holding - Prague	Members, 39	PK ČR
24/9/2009	Executive Committee	Members	CR, Olympik Holding - Prague	Members, 8	PK ČR
30/9/2009	WG for Milk Products	Members	CR, FFDI's premises,	Members, 11	PK ČR

Dissemination of K					
Planned/actual Dates	Туре Туре	e of audience	Countries addressed	d Size of audience	Partner responsible /involved
1/10/2009	WG for BIO Foodstuffs	Members	Prague CR, FFDI's premises, Prague	Members, 12	PK ČR
12/10/2009	CTP - WG for Alcohol	Members	CR, FFDI's premises, Prague	Members, 10	PK ČR
15/10/2009	Meeting of WG for Trade Policy & Marketing	Members	CR, FFDI's premises, Prague	Members, 16	PK ČR
19/10/2009	CTP - Meeting for WG for Healthy Lifestyle	Members	The National Institute of Public Health, Brno	Members	PK ČR
22/10/2009	Executive Committee	Members	CR, Hotel SEN, Senohraby	Members	PK ČR
29/10/2009	CTP – WG for Priority Food and Consumer	Members, non-members	CR, The Czech	-	PK ČR
4/11/2009	WG for Milk Products	Members	CR, FFDI's premises, Prague	Members, 13	PK ČR
24/11/2009	Meeting of WG for Frozen Food Products	Members	CR, FFDI's premises, Prague	Members, 26	PK ČR
25/11/2009	Meeting of WG for Bakery's production	Members	CR, Prague	Members, 14	PK ČR
26/11/2009	Executive Committee	Members	CR, S.E.N.	Members, 5	PK ČR

Dissemination of K					
Planned/actual Dates	Type Ty	ype of audience	Countries addressed	d Size of audience	Partner responsible /involved
			Senohraby,		
2/12/2009	WG for Milk Products	Members	Prague CR, FFDI's premises, Prague	Members, 11	PK ČR
2/12/2009	Legislation Committee	Members	CR, FFDI's premises, Prague	Members, 26	PK ČR
3/12/2009	WG for BIO Foodstuffs	Members	CR, FFDI's premises, Prague	Members, 19	PK ČR
9/12/2009	CTP – WG for Priority Foo and Consumer	d Members, non-members	CR, The Czech	Members, 15	PK ČR
15/12/2009	CTP – Steering Committee	Members and non-members	CR, FFDI's	Members and non- members, 14	PK CŘ
17/12/2009	Executive Committee	Members	CR, Hotel Olympik, Prague	Members, 6	PK ČR
17/12/2009	Board of Companies Directors	Members	CR, Hotel Olympik, Prague	Members, 26	PK ČR
6/1/2009	WG for Milk Products	Members	CR, FFDI's premises,	Members, 16	PK ČR
26/1/2010	Meeting of WG for Frozen Food Products	Members	Prague CR, FFDI´s premises, Prague	Members, 26	PK ČR
			J		

Planned/actual Dates	Type T	ype of audience	Countries addressed	d Size of audience	Partner responsible /involved
3/2/2010	WG for Milk Products	Members	CR, FFDI's premises, Prague	Members, 17	PK ČR
4/2/2010	WG for BIO Foodstuffs	Members	C	Members, 21	PK ČR
10/2/2010	Environmental Affairs Committee	Members	CR, FFDI's premises, Prague	Members, 34	PK ČR
15/2/2010	Meeting for WG for Health Lifestyle	y Members		Members, 21	PK ČR
16/2/2010	CTP – Steering Committee	Members and non-members	CR, FFDI's	Members and non- members, 13	PK CŘ
16/2/2010	CTP - Science and Researc Committee	h Members		Members, 14	PK ČR
17/2/2010	CTP - WG for Alcohol	Members	CR, Vysoký Chlumec	Members, 17	PK ČR
17/2/2010	Legislation Committee	Members	CR, FFDI's premises, Prague	Members, 24	PK ČR
18/2/2010	Meeting for WG for Health Lifestyle	y Members		Members, 22	PK ČR
3/3/2010	WG for Milk Products	Members		Members, 23	PK ČR

Dissemination of K					
Planned/actual Dates	Туре Туре	e of audience	Countries addressed	d Size of audience	Partner responsible /involved
2 – 4/3/2010	SALIMA 2010 Food Fair, project dissemination through FFDI meetings with national state administration (Ministers, Members of Parliament and Senate etc.)	-	CR, Brno	-	PK ČR
9/3/2010	CTP – WG for Priority Food and Consumer	Members, non-members	CR, The Czech Consumer Association	Members, 16	PK ČR
24/3/2010	Meeting of WG for Bakery's production	Members	CR, Prague	Members, 19	PK ČR
1/4/2010	WG for BIO Foodstuffs	Members	CR, FFDI's premises, Prague	Members, 25	PK ČR
7/4/2010	WG for Milk Products	Members	CR, FFDI's premises, Prague	Members, 19	PK ČR
21/4/2010	Meeting for WG for Healthy Lifestyle  Series of TRAININGS:	Members	CR, FFDI's premises, Prague	Members, 24	PK ČR
20. 1. 2009 21. 1. 2009 22. 1. 2009 10. 2. 2009 11. 2. 2009 12. 2. 2009 3. 3. 2009	Training to SMEs (EAFRD) focused on requirements for protection of the Environment incl. of their impacts into competitiveness of entrepreneurial subjects.	Members, non-members	CR: Praha Ustí nad Labem Plzen Ceské Budejovice Jihlava Pardubice	-	PK CR

Dissemination of K					
Planned/actual Dates	Туре Т	ype of audience	Countries addressed	d Size of audience	Partner responsible /involved
4. 3. 2009 5. 3. 2009 24. 3. 2009 3/11/2009 4/11/2009 10/11/2009 11/11/2009 12/11/2009 18/11/2009 25/11/2009 26/11/2009	Training to SMEs (EAFRE focused on Foodstuffs Safety and Quality: Claims specific and quality aspects of regional and traditional foodstuffs, rules for production and trade with BIO products, origin's labelling of agr. products and foodstuffs etc.	Members, non-members	Brno Zlín Velká Bystřice Hradec Králové CR: Brno Zlín Praha Ustí nad Labem Plzen Ceské Budějovice Jihlava Jičín Pardubice	aprox. 191	PK ČR
7/4/2010 8/4/2010 20/4/2010 21/4/2010 22/4/2010 4/5/2010 5/5/2010 11/5/2010 12/5/2010	Training to SMEs (EAFRE focused on acreditation and certification of systems and products in CR, audit according to ISO 19011, requirements on import to Russia etc.	Members,	CR: Brno Zlín Praha Ustí nad Labem Plzen Ceské Budějovice Jihlava Jičín Pardubice		PK ČR
	P. R. through PUBLICATIONS/				

Dissemination of Ki					
Planned/actual Dates	Type Ty	pe of audience	Countries addresse	d Size of audience	Partner responsible /involved
5/2000 4/2000	JOURNALS	- Nr. 1	CD	<b>N</b> 1 4 500	DIZ ČD
5/2008 – 4/2009	Newspaper: Potravinářský zpravodaj (FFDI's edited monthly newspaper)	Members	CR	Members, 4.500 people	PK ČR
2008 – 2009	Bakery's Journal: Pekař a cukrář	Members	CR	Members, 3.200 people appr.	PK ČR
2008 – 2009	Professional Food Journal: Moderní obchod	Members	CR	Members, non- members, general public 5.000 people appr.	PK ČR
2008 – 2009	Professional Food Journal: Výběr	Members	CR	Members, 5.500 people appr.	PK ČR
2008 – 2009	Economy Journal: Komora CZ	Members	CR	7.000 people appr.	PK ČR
2008 – 2009	Academy Journal: Akademický bulletin	Members	CR	5.300 people TBC	PK ČR
2008 – 2009	Agricultural Journal: Zemědělec	Members	CR	5.800 people TBC	PK ČR
2008 – 2009	Journal Svět potravin/World of Foodstuffs (FFDI's monthly periodics) MEDIA:	d Members	CR	10.000 people TBC	PK ČR
12/5/2008	Briefing to Project's actual state of affairs and Law's key issue – conference with Czech member of Parliament (J. Bobošíková)	á 31 journalists	CR	á 31 journalists	PK ČR
22/9/2008	Media - Briefing - Conference	á 29 journalists	CR	á 29 journalists	PK ČR

Dissemination of Ki					
Planned/actual Dates	Туре Тур	e of audience	Countries addressed	d Size of audience	Partner responsible /involved
24/11/2008	Briefing – conference with Czech Member of EU Parliament	á 17 journalists	CR	á 17 journalists	PK ČR
27/1/2009	Briefing – conference	á 18 journalists	CR	á 18 journalists	PK ČR
31/8/2009	Briefing – conference with ex-EP Member Mr. Jaroslav Zvěřina	á 18 journalists	CR	á 18 journalists	PK ČR
3/11/2009	Briefing related to project activities: "Hravě žij zdravě"	á 14 journalists	CR	á 14 journalists	PK ČR and Quent, s r.o.
monthly	Newsletter	Industry	Hungary	300	FHFI
Regularly updated	Project web-page on the Federation's web-site	General public, Higher education, Research, Industry	$\mathcal{O}$	800	FHFI
June 2009	Seminar + Flyers	Industry	Hungary	30	FHFI+CCH
October 2009	Seminar + Flyers	Industry, Higher education, Research, General public	Hungary	97	FHFI+CCH
November 2009	Seminar + Flyers	Industry, Higher education, Research	Hungary	28	FHFI+CCH +NOFIMA

Dissemination of Kn	ıowledge – YEAR 2009/2	010	7		
Planned/actual Dates	Туре	Type of audience	Countries addressed	d Size of audience	Partner responsible /involved
February 2010	Seminar + Flyers	Industry, Higher education, Research	Hungary	59	FHFI+CCH
February 2010	Training + Flyers	Industry, Higher education	Hungary	25	FHFI+CCH
March 2010	Conference + Flyers	Industry	Hungary	40	FHFI+CCH
April 2010	Conference + Flyers	Industry , Higher education, Research, General public	Hungary	50	FHFI+CCH
February 2010	Invitation to seminar in March by: Established Network Working groups Committees	Members, Members of The Danish Plastindustries , Members of The Danish Metal & Machinery Industry	Denmark	1150	The Danish Food and Drink Federation
24. February 2010	Invitation to seminar in March by: Newsletter	Members and other food industries	Denmark	680 every 14 day	The Danish Food and Drink Federation
4. March 2010	Seminar	Members and other food industries	Denmark	75	The Danish Food and Drink Federation

Dissemination of K					
Planned/actual Dates	Туре Тур	oe of audience	Countries addressed	d Size of audience	Partner responsible /involved
April 2010	Invitation to workshop: Food in Later Life (FILL)	Members and other food industries	Denmark	250	The Danish Food and Drink Federation
26. April 2010	Workshop	Members and other food industries	Denmark	50	The Danish Food and Drink Federation
ongoing	Project web-site	Food Industry	Austria	1000	LVA/FIAA
ongoing	Flyers/Newsletter	Food Industry	Austria	500	LVA/FIAA
26.02.09	Information Event	Food Industry	Austria	100	LVA/FIAA
28.08.09	Market information event	Food Industry	Austria	100	LVA/FIAA
11-13/05/2009	I meeting of the Technological Platforms Food for Life-Spain	Research and industry (all food sector)	Barcelona. Spain	200	BTA
11/05/2009	IV Technological European National Platforms meeting.	Research and industry	Barcelona. Spain	200	BTA
18/05/2009	Launch of the Greek National Technology Platform	Research and industry (all food sector)	Athens. Greece	200	PT Griega
19-20/05/2009	TRUEFOOD General Assembly	Research and industry (all food sector)	Athens. Greece	200	TRUEFOOD
21/05/2009	V Congress of Science and Food Technology	Research and industry (all food sector)	Murcia. Spain	70	University of Murcia
26-27/05/2009	Private Label Market Amsterdam PLMA	Research and industry (all food sector)	Amsterdam. Netherlands	200	PLMA
27/05/2009	CESFAC General Assembly	Industry (compound	Madrid. Spain	50	CESFAC-Spanish Association of feed

Dissemination of K					
Planned/actual Dates	Туре Т	ype of audience	Countries addresse	d Size of audience	Partner responsible /involved
		feed)			compound manufacturers- Innovation Group
28/05/2009	FIAB General Assembly	Industry (all food sector)	Madrid. Spain	100	FIAB
29/05/2009	UII's meeting and Technological Platform	Research and industry (all food sector)	Madrid. Spain	70	CDTI
1/06/2009	I conference about milk	Research, industry (dairy milk) and higher education	Asturias. Spain	50	The National Centre for the Study of. Milk Technological Competence and the University of Asturias
2/06/2009	Breakfast workshop with the Secretary of State for Research	he Industry (all food sector)	Madrid. Spain	20	MICINN
3/06/2009	Conference on Energy Efficiency in Fisheries	Research and industry (fishery)	Vigo. Spain	50	ANFACO- CECOPESCA
3/06/2009	The presentation of the blank book about dairy mil	Research,	Madrid. Spain	70	FENIL
4-5/06/2009	Federalimentare General	Research,	Milán. Italy	200	FEDERALIMENT

Planned/actual Dates	Туре Ту	pe of audience	Countries addresse	ed Size of audience	Partner responsible /involved
	Assembly	industry (all food sector) and higher education			ARE
9/06/2009	Presentation of the Cotec report about technology and innovation in Spain	Research, industry (all food sector) and higher education	Madrid. Spain	60	COTEC
18/06/2009	Exhibition: How can you increase the food safety of my products?	Higher education	Burgos. Spain	45	University of Burgos
18-19/06/2009	Conference about "innovate to differentiate our products and to win new markets	/	Zaragoza. Spain	80	MARM
19/06/2009	Bilateral meeting	Industries (all food sector)	Madrid. Spain	3	ZURKO RESEARCH
22/06/2009	Directors' committee of FIAB (Associations)	Industry (all food sector)	Madrid. Spain	50	CEOE
3/07/2009	Conference: R+D about robotic	Research, industries (all food sector) and higher education	Madrid. Spain	47	ANFACO- CECOPESCA
6-7/07/2009	Conference about innovatio and technological food. A	n Research, industries (all	Segovia. Spain	60	UPM

Dissemination of K					
Planned/actual Dates	Туре	Type of audience	Countries addresse	d Size of audience	Partner responsible /involved
	big opportunity for the global food crisis	food sector) and higher education			
9/07/2009	Exhibition about report of ASEBIO		Madrid. Spain	49	ASEBIO
14/07/2009	Bilateral meeting with Innopan and Scientific an Technological Food Park Lerida	Industry d (bread and	Madrid. Spain	4	INNOPAN
20/07/2009	Directors' committee of FIAB (Associations)	Industry (all food sector)	Madrid. Spain	50	CEOE
22/07/2009	The traceability in the transport by road	Industry (all food sector)	Madrid. Spain	78	AEUTRANSMER
21/09/2009	Directors' committee of FIAB (Associations)	Industry (all food sector)	Madrid. Spain	50	CEOE
24/09/2009	Workshop on the 7Framework Program- EU for R+TD: Opportunities for SMEs a Public Organizations Researchers to join in research collaborative activities of the Agricultu Food and Biotechnology Sectors	Industry (all food sector)	Madrid. Spain	86	INIA
6-7/10/2009	Food Fast Forward "Boosting cross border collaboration in food	Industry (all food sector)	Wageningen. Netherlands	40	FIAB, CDTI

Planned/actual Dates	Туре Т	ype of audience	Countries addresse	d Size of audience	Partner responsible /involved
	innovation"				
15-16/10/2009	Bilateral meetings	Industry (jerez wine sector)	Sevilla. Spain	10	FEDEJEREZ
19/10/2009	Directors' committee of FIAB (Associations)	Industry (all food sector)	Madrid. Spain	50	CEOE
17-19/11/09	Food Ingredients Europe 2009	Industry (food ingredients)	Frankfurt. Germany	100	FIE
16-17/11/09	Conference about Biotechnology and food in the century XXI	Research, industry (all food sector) and higher education	Cuenca. Spain	50	FIAB
18/11/2009	Conference about innovation in the food industry though the production technology automation and robotic	,	Valencia. Spain	67	AINIA and Robotics Spanish Association and Production Technology Automation (AER-ATP)
19-20/11/09	Bilateral meeting	Industry (all food sector)	Barcelona. Spain	5	AMEC
23/11/2009	Directors' committee of FIAB (Associations)	Industry (all food sector)	Madrid. Spain	50	CEOE
02/12/2009	Logistop General Assembly	Research, industry (all food sector) and higher education	Madrid. Spain	102	Logistop Platform

Planned/actual Dates	Туре Тур	e of audience	Countries addresse	d Size of audience	Partner responsible /involved
25/01/2010	Bilateral meeting	Research and higher education	Madrid. Spain	6	CDTI
26/01/2010	Directors' committee of FIAB (Associations)	Industry (all food sector)	Madrid. Spain	50	CEOE
4-5/02/2010	Conference about Innovation for a healthy food. Keys for the improvement of competitiveness in the food processing and press media	Research, industry (all food sector) and higher education	Logroño. Spain	100	FIAB
10/02/2010	IV Conference of CDTI about Technological International Cooperation	Research, industry (all food sector) and higher education	Madrid. Spain	200	CDTI
10/02/2010	IV Conference of CDTI about Technological International Cooperation	Research, industry (all food sector) and higher education	Madrid. Spain	200	CDTI
16/02/2010	Bilateral meeting	Research and industry (all food sector)	Bilbao. Spain	4	AZTI Foundation and Belgium Platform
19/02/2010	Bilateral meeting	Higher education and industry (all food sector)	Madrid. Spain	6	COTEC Foundation
01/03/2010	Directors' committee of FIAB (Associations)	Industry (all food sector)	Madrid. Spain	50	CEOE

Dissemination of K					
Planned/actual Dates	Type Type	e of audience	Countries addressed	d Size of audience	Partner responsible /involved
02/03/2010	Pathogencombat project	Research and industry (all food sector)	Brussels. Belgium	50	Other TRUEFOOD partnert
03-04/03/2010	ETP&NTP events Food for Life	Research and industry (all food sector)	Brussels. Belgium	50	Other TRUEFOOD parnert
08-10/03/2010	WP 6 and WP 8 meetings and workshop at the Istanbul University	Research and industry (all food sector) and higher industry	Istanbul. Turkey	40	Other TRUEFOOD parnert (WP6 & WP8)
11/03/2010	Innovation Plan	Research and industry (all food sector) and higher industry	Madrid. Spain	1500	MICINN
18/03/2010	The lacteal sector: scenes of evolution	Industry (dairy sector)	Pozoblanco. Córdoba. Spain	200	COVAP
22-24/03/2010	Alimentaria 2010 exhibition	Research and industry (all food sector) and higher industry	Barcelona. Spain	300	FIAB. IRTA. FEDERALIMENT ARE (Italy). ACTIA (France). FHFI (Hungary)
12-13/04/2010	Final Assembly	Research and industry (all food sector) and higher industry	Brussels. Belgium	150	Other TRUEFOOD parnert
April 2009	Workshop	SME /	Portugal	300	Ghent University

Planned/actual Dates	Туре Т	ype of audience	Countries addresse	d Size of audience	Partner responsible /involved
	"Strategic Management of Food Chain"	Research Centres / Other Stakeholders			
November 2009	Workshop "Add Value to Traditional Foods"	SME / Research Centres / Other Stakeholders	Portugal	300	Escola Superior de Biotecnologia da Universidade Católica do Porto
February 2010	Workshop "Sustainable Development of Business Innovation"	SME/	Portugal	40	COTEC
January 2010	Radio Interview to Professor Tim Hogg	ı			
	TRUEFOOD Info All editions	General Public Industry (all sectors) Research	Portugal	2 000	
	Website Information about TRUEFFOD on the new FIPA Website (www.fipa.p	General Public Industry (all sectors) Research	Portugal	3 000	
	Exhibition Stand TRUEFOOD in all	General Public	Portugal	-	

Dissemination of K	Dissemination of Knowledge – YEAR 2009/2010					
Planned/actual Dates	Туре Т	ype of audience	Countries addressed	d Size of audience	Partner responsible /involved	
	FIPA events	Industry (all sectors) Research				
	Flyers Distribution in all FIPA events	General Public Industry (all sectors) Research	Portugal	3 000		
30-31 January 2009	I. World Doner Congress Leaflets and presentation	Meat Industry Sector - SMEs	•	200	SETBIR	
15 April 2009	'Red Meat Conference' Leaflets, Brochures	Meat Industry Sector - SMEs	Ankara/ Turkey	250	SETBIR	
23 May 2009	'Milk Conference and Milk Race for World Milk Day' Leaflets, Brochures	k Dairy	Ankara/ Turkey	350	SETBIR	
June 2009	Food Safety Magazine Publication	Food Industry SMEs	Whole Turkey	6000	SETBIR	
8 October 2009	TF info day at Hacettepe University Food Engineeri Faculty 2 hour presentation about ' project results, Trophelia and GEGUP, Leaflets, Brochures	students and	Ankara/ Turkey	60	SETBIR	
12 October 2009	TF info day at Ankara University Faculty of Veterinary Medicine 2 hour presentation about ' project results, Trophelia	post graduated students and IF university lecturers	Ankara/ Turkey	35	SETBIR	

Dissemination of Knowledge – YEAR 2009/2010					
Planned/actual Dates	Туре Туре	e of audience	Countries addressed	d Size of audience	Partner responsible /involved
16 October 2009	and GEGUP, Leaflets, Brochures World Food Day- 3 rd Training Seminar with Turkish Flour Industrialists Federation	Food Industry SMEs	Gaziantep/ Turkey	60	SETBIR
21 October 2009	Leaflets, Brochures, info- sheets, 1 day 4 th Training Seminar with The Union Of Chambers and Commodity Exchanges of	Food Industry SMEs	İstanbul/ Turkey	50	SETBIR
26 October 2009	Turkey Leaflets, Brochures infosheets, 1 day TF info day at Ankara University Faculty of Agricultural 2 hour presentation about TF	post graduated students and university	Ankara/ Turkey	40	SETBIR
2 December 2009	project results, Trophelia and GEGUP, Leaflets, Brochures '2009 Food Year- Food Safety in Turkey and EU Seminar'	Food Industry SMEs	Tekirdağ/ Turkey	58	SETBIR
3 December 2009	Leaflets, Brochures and 30 minute presentation '2009 Food Year- Food Safety in Turkey and EU Seminar'	Food Industry SMEs	Edirne/ Turkey	41	SETBIR

Dissemination of K					
Planned/actual Dates	Туре Ту	pe of audience	Countries addressed	d Size of audience	Partner responsible /involved
	Leaflets, Brochures and 30 minute presentation				
9 March 2010	Media Briefing Announced in Chief news	General Public	İstanbul/ Turkey	Whole Turkey	SETBIR
10 March 2010	Press Release	General Public	Whole Turkey	Whole Turkey	SETBIR
10 March 2010	Workshop on TRUEFOOD Results	Higher education, research	İstanbul/ Turkey	15	SETBIR
2009	website	Food Industry SMEs	Turkey	900	SETBIR
February 2009 – April 2010	9 Articles in SEVT newspaper	SEVT Members	Greece		SEVT
February 2009 – April 2010	4 press releases were sent to the media for the TRUEFOOD activities in Greece	General public	Greece		SEVT
May 2009	A Press conference was organized for the 5th General Assembly of TRUEFOOD	Journalists	Greece		SEVT
May 2009	15 Articles in magazine, newspaper, websites for the 5th General Assembly of TRUEFOOD in Athens	General public	Greece		SEVT
November 2009	A roundtable was organized with journalists where the TRUEFOOD was presented		Greece	20 Journalists	SEVT

Dissemination of Knowledge - YEAR 2009/2010						
Planned/actual Dates	Туре	Type of audience	Countries ad	ldressed	Size of audience	Partner responsible /involved
February 2010	by the President TRUEFOOD video	o General public	Greece			SEVT
Conferences						
March 2009	"Cyprus Food & Drinks Info-day" organized by the Cyprus Chamber of Commerce & Industry in Nicosia	Industry, Research	Cyprus	50	·-	T: Oral Presentation of EFOOD Project
March 2009	SEVT General Assembly	Industry, Academia	Greece	200	TRU Distr brock Distr	Presentation of EFOOD Project ibution of TRUEFOOD
May 2009	Info-meeting between universities/Resea rch centres and SEVT companies	Academia, Industry	Greece	30	SEV TRU Distr brock Distr	T: Presentation of EFOOD Project ribution of TRUEFOOD
May 2009	Joint event of TRUEFOOD and the Greek technology Platfrom ''Food	Industry, Academia, Ministries	Greece	150	SEV TRU Distr brock	T: Oral Presentation of EFOOD Project ribution of TRUEFOOD

Dissemination of Knowledge – YEAR 2009/2010						
Planned/actual Dates	Туре	Type of audience	Countries addre	essed Size of aud	Partner responsible lience /involved	
June 2009	for Life", Conference on "Food Safety In Europe: Cooperation Between EFSA & The Member States"	Industry, Academia, Ministries	Greece	150	Annual report Distribution of TRUEFOOD brochure Distribution of SEVT Annual report	
March 2010	SEVT General Assembly	Industry, Academia	Greece	200	SEVT: Oral Presentation of TRUEFOOD Project Presentation of TRUEFOOD video Distribution of TRUEFOOD brochure Distribution of SEVT Annual report	
Exhibition November 2009 – March 2010	5 TRUEFOOD seminars	Industry	Greece	120	SEVT: Oral Presentation of TRUEFOOD Project Distribution of TRUEFOOD brochure Distribution of Info-sheets Distribution of SEVT Annual report	
January 2010	23 <sup>rd</sup> International Food -Drink - Technology Exhibition:	Industry, Academia	Greece	50	SEVT: Oral Presentation of TRUEFOOD Project	

Dissemination of Knowledge – YEAR 2009/2010						
Planned/actual Dates	Туре	Type of audience	Countries add	ressed Size of auc	Partner responsible lience /involved	
Publications	Symposium on the Traditional Foods					
November 2008	A leaflet for TRUEFOOD prepared for the journalists participated to the roundtable	Journalists	Greece	20	SEVT	
March 2009	SEVT annual report	General public	Greece	1000	SEVT: contains an extensive presentation of TRUEFOOD project	
March 2010	SEVT annual report	General public	Greece	1000	SEVT: contains an extensive presentation of TRUEFOOD project	
March 2010	TRUEFOOD Guidelines on the Technology Transfer	Industry	Greece	35	SEVT disseminated the booklet to SMEs during the General Assembly	
Project web-site	www.sevt.gr	General public	Greece		SEVT	
Direct e-mailing				100 7		
	Informing SEVT Members and academia for the news and the results of TRUEFOOD project.	Industry and Academia	Greece	100 Enterprises 80 Researchers	SEVT	