



African Food Tradition rEvisited by Research
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Abstract

The purpose of this deliverable is to explain what ways and tools have been used to transfer knowledge to SMEs. Knowledge transfer was done to African SMEs essentially via AAFEX work and to European SME essentially via SPES. The tools for transferring knowledge were first identified by Techno Scientific Mediators (TSMs) whose role is described in a first part. Then, the tools of transfer to European SMEs are detailed in a second part and finally the tools used for transfer of knowledge to African SMEs are detailed in a third and last part.

Definitions

Technology Dissemination Unit (TDU): A specific function established at 11 food and drink industry federations for dissemination of the information on new research results and for promoting technology transfer.

Techno-Scientific Mediator (TSM): A person, mainly working in a Food & Drink Industry Federation with the aim is to create a bridge between industry and academia.

Introduction

By generating and sharing knowledge on food technology, the AFTER project intends, for each product group (fermented cereal-based products, fermented and salted fish and meat, traditional plant based extracts for functional foods), to improve, to develop or to create a product or a technology of interest to both European and African food companies. The AFTER project contributes directly to improve the competitiveness of these products and technologies, and it facilitates their implementation and uptake by food companies and their marketing on African and European markets.

To facilitate the exploitation of results by companies (especially SMEs), SPES defined appropriate ways and tools to inform food producers using Techno Scientific Mediators (TSMs). The AAFEX network of members will also be used to disseminate the project results in Africa.

Techno-Scientific Mediators (TSMs) and their role

The project Truefood “Traditional United Europe Food” put in place a structure of continuous training and dissemination through the SPES Food & Drink Industry National Federations, and forms a team of **Techno-Scientific Mediators (TSMs)**¹, whose role is to disseminate the project findings throughout the socio-economic layers of the European food and drink industry, targeting particularly the small and medium-sized enterprises involved in the production of traditional foods. The knowledge transfer to the food and drink industry is implemented through different activities, mainly through training, dissemination and communication events.

A **Training and Dissemination Unit (TDU)** was established in each National Federation. The aim of the TDUs is to ensure a structured link between research and industry. The 11 units implement training and technology transfer activities to SMEs, involved mainly in the production of traditional food. The **Techno-Scientific Mediators (TSMs)**, working in the TDUs have the main responsibility for these activities. TSMs work in collaboration with the ETP "Food for Life" platforms and the National Food Technology Platforms (NFTP).

Role of the mediators

1. Efficient transfer of knowledge and technology to SMEs requires more than technical competence.
2. Knowledge transfer is frequently performed by intermediates called mediators or facilitators. Mediator organisations can play a significant role in attracting SMEs for participation in innovation and learning networks and fostering the exploration of the R&D results.
3. Such mediator functions are provided by national food technology platforms (NFTPs) set up by the European Technology Platform - ETP "Food for Life" (<http://etp.ciaa.eu/asp>), by the food and drink industry federations and associations or industry owned food research associations, carrying out R&D tasks specified and monitored by the industry. Some of the mediators working for the food industry federations amalgamated into the SPES consortium are called Techno-Scientific Mediators (TSMs).
4. Industry personnel, especially owners, managers, decision makers of SMEs have limited time to screen research results for identifying those ones which are relevant to their needs. Mediators can identify training needs of SMEs and propose relevant training.
5. The mediator/technology transfer personnel should draw the attention of the SMEs to the consumer needs.
6. Mediators should collect the needs of the companies systematically and organize them into a database which can be used by the whole knowledge transfer unit for matching industry needs and potential knowledge providers.
7. Mediators should have a good overview of several disciplines and should have practical experience in the food industry preferably at SMEs like stakeholders.

¹ For more information:

<http://www.truefood.eu/files/FinalPresentations/12%20Presentation%20Andras%20Sebok.pdf>

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8. Discussion (both written and oral) with the industry requires specific communication skills: specific rules have to be followed for writing a scientific synthesis of scientific results for SMEs to make the communication more effective. And centres in innovation can also provide full solutions for industry.

Main ways and tools of knowledge transfer used for Europe in the frame of AF-TER project

How to transfer knowledge of products to companies?

After the experience of Truefood project and the development of the “Guideline on effective knowledge and technology transfer activities to SMEs in the food sector with particular focus on traditional food manufacturers (2006)”, the knowledge and technology transfer tools were detected. Some of which have been used to disseminate results of AFTER project.

The combined use of several tools is usually more effective than the use of one tool by itself. The tools for knowledge transfer are selected by the organization involved regarding the needs and preferences of the targeted audience. The tools selected by SPES and used for knowledge transfer to European SMEs are resumed in the following table:

TARGET	COMMUNICATION TOOLS°	MEDIA ACTION	NON MEDIA ACTIONS	PARTNERS
European Companies	<ul style="list-style-type: none"> • Guidelines • Product Catalogues • short research summary sheets; • Best practice guides; • Booklets on success stories; • Booklets on specific subjects; 	<ul style="list-style-type: none"> • Web site • Project summaries (extracts, short descriptions on project web-sites) • Leaflets 	<ul style="list-style-type: none"> • Training courses; • workshops; • demonstrations; • learning through collective research • transfer of personnel • guided experimentation through R&D projects; • activities in network • consultancy; 	SPES partners Research
European Consumers	<ul style="list-style-type: none"> • Posters; • leaflets; 	<ul style="list-style-type: none"> • Radio • Internet • Publicity in press • E-mail 	<ul style="list-style-type: none"> • Trade fairs 	Consumers Associations Technology Platform Food for Life-Spain
Specialists, experts, researchers	<ul style="list-style-type: none"> • Scientific publications in impact factor journals; • books; • industry best practice guides; 	<ul style="list-style-type: none"> • Web site • E.mail 	<ul style="list-style-type: none"> • presentations at scientific conferences; • participation in research networks; • transfer of people, industry placements; • personal visits; • apprenticeships 	Technology Platform Food for Life-Spain
National and international institutions	<ul style="list-style-type: none"> • Annual report • Short summary Sheet • Newsletters 	<ul style="list-style-type: none"> • Web sites 	<ul style="list-style-type: none"> • Information seminars • Professional meetings 	Technical services of food, agriculture, industry and trade ministers

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What can be transferred?

The most relevant results obtained in WP2, 3 and 4 were transferred to Europe:

- Final products (food products or functional ingredients): <http://www.after-fp7.eu/produits>
- technology/processes
- starters, strains, general principles of production
- African know-how will be valorized as much as possible at European level.

For each type of application selected, European technical centers from ACTIA worked on improved processes and technologies developed and produced product samples which were used as demonstration samples for European food or ingredients companies.

A final report on Transfer of the improved processes and technologies has been published.

Website of AFTER project: <http://www.after-fp7.eu/>

Dissemination report describing targets, materials and channels

Workshop and conference reports

Knowledge transfer and IPR reports

For each product of AFTER a guideline explaining the improved process step by step was written. Even though these guidelines were written to address local African producers, they could be distributed in Europe and easily adapted to local European conditions.

Presentations of AFTER during fairs and other shows

AFTER project was presented during fairs and shows, this participates to the knowledge transfer. The list of events during which AFTER was present is summarized in the table below:

EVENT	PLACE AND DATE	PUBLIC
Alimentaria & Horexpo.	Lisbon, Portugal 14-17 April 2013	Food companies and General Public
CIBUS Food Fair	Parma, Italy May 2013	General Public
Nutrevent	Paris, France 19-20 June 2013	General Public

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20th International Nutrition Congress	Granada, Spain 15-21 September 2013	General Public
ANUGA Fair	Cologne, Germany 6-7 October 2013	Stand for food companies & General Public
VI Food Symposium Murcia and Brokerage Event	Murcia, Spain 29 October 2013	General Public
Transfiere Forum	Málaga, Spain 12-13 February 2014	General Public
Food National Technology Platforms (NFTP) Meeting	Athens, Greece 10-11 March 2014	General Public
ALIMENTARIA Fair	Barcelona, Spain 20 March-3 April 2014	Stand for food companies & General Public
CIBUS Fair	Parma, Italy 6 May 2014	Stand for food companies & General Public
NFTP Meeting and SPES Meeting	Brussels, Belgium 19-20 May 2014	General Public
XVI meeting of the Spanish Nutrition Society (SENT)	Pamplona, Spain 3-5 July 2014	General Public
XIII meeting about system of INIA of Latinoamerica	Jalisco, Mexico 9-11 September 2014	General Public
NFTP Meeting and SPES Meeting	Turin, Italy 6 October 2014	General Public
SIAL 2014	Paris, France 19-23 October 2014	General Public
NAOS Strategy at a Glance : Present and Future. Climate, food and human health in preparation for EXPO MILAN 2015	London, England 20 October 2014	General Public
AFTER Congress	Dakar, Sénégal 11 & 12 November 2014	Researchers, Producers
Alimentaria Fair	Barcelona, Spain 31 March 2014	industries
TRANSFIERE Food For Live- Spain	11 12 February 2014	Companies, technological center, universities
BTA Barcelona	21-24 April 2014 Barcelona, Spain	Comapanies, technological centers consumers

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Murcia Food Brokerage Event	29 October 2014 Murcia, Spain	Companies, technological center, consumers
Expo Milano	May 1st – October 31st 2014 Milano, Italy	Companies, technological centers, consumers



Main ways and tools of knowledge transfer used for Africa in the frame of AFTER project

How to transfer knowledge of products to companies?

The following table presents the tools to transfer knowledge to African SMEs used by AAFEX:

TARGET	COMMUNICATION TOOLS°	MEDIA ACTION	NON MEDIA ACTIONS	PARTNERS
African Companies that develop the products	<ul style="list-style-type: none"> Guidelines Sample products Short Products sheet Product Catalogues short research summary sheets; best practice guides; booklets on success stories; booklets on specific subjects 	<ul style="list-style-type: none"> Web site trade press articles ; project summaries (extracts, short descriptions on project web-sites); web-based self-assessment tools; 	<ul style="list-style-type: none"> Training courses; workshops with practical exercises; demonstrations; learning through collective research transfer of personnel guided experimentation through R&D projects; activities in network consultancy; 	AFTER's partners Research European companies
Traditional African Companies that deals in processing and might be interested in the	<ul style="list-style-type: none"> Guidelines Presentations at industry meetings, seminars conferences organized for the industry seminars organized 	<ul style="list-style-type: none"> Web site trade press articles; project summaries (extracts, short descriptions on project web-sites); Press releases 	<ul style="list-style-type: none"> Demonstration Training sessions personal visits to companies; discussions in expert panels, networks; 	Technical centers African Companies

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products	<ul style="list-style-type: none"> on a specific subject short summary sheets newsletters posters booklets, leaflets Annual reports USB Key booklets on success stories AAFEX Newsletters 		<ul style="list-style-type: none"> Trade Fairs 	
Consumers in Africa	<ul style="list-style-type: none"> Cookbooks posters; leaflets; Tshirt, Products samples 	<ul style="list-style-type: none"> Radio TV Internet Publicity in press 	<ul style="list-style-type: none"> Tasting sessions Promotional Campaigns Trade fairs 	Local radio and TV Local "Eat what you produce" programs Consumers and local food producers Associations
Specialists, experts, researchers	<ul style="list-style-type: none"> Scientific publications in impact factor journals; books; industry best practice guides; 	TV programs on food and research	<ul style="list-style-type: none"> presentations at scientific conferences; participation in research networks; transfer of people, industry placements; personal visits; apprenticeships 	
National and international institutions	<ul style="list-style-type: none"> Annual report Short summary Sheet short Films Newsletters USB keys 	<ul style="list-style-type: none"> Web sites TV (interviews) 	<ul style="list-style-type: none"> Information seminars Professional meetings 	Technical services of food, agriculture, industry and trade ministers International backers, UEMOA, CEDEAO...

What can be transferred to African companies?

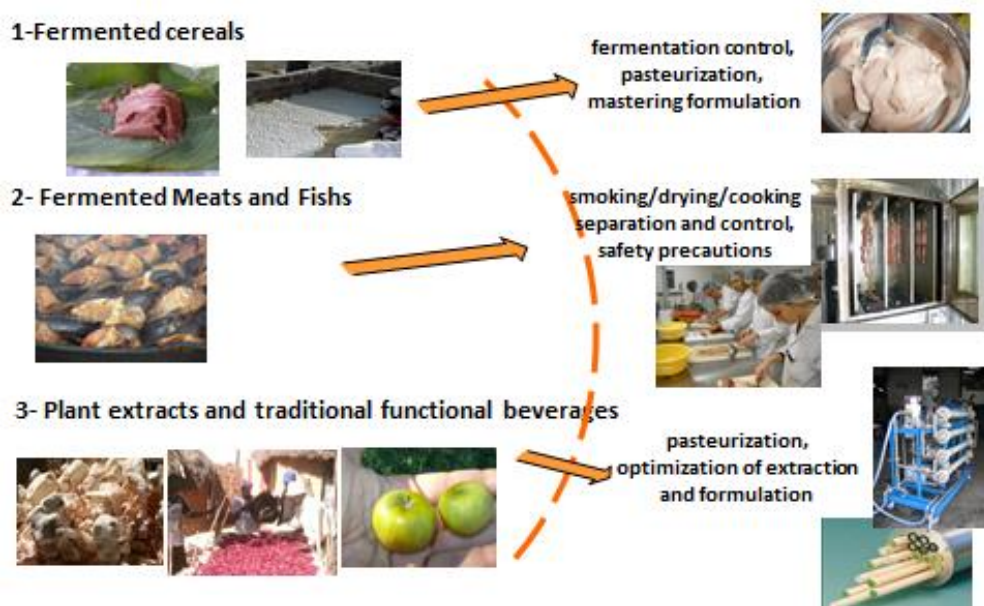
For each of the ten products, guidelines of good practices were published for African producers and industries. These guidelines cover the following fields: food quality and safety (identification and description of critical points, proposition of methodologies for improvement like HACCP settlement, challenge tests...), nutritional quality (improvement...), processing (optimization of the process...), sustainability (better respect of environment, optimizing energy consumption...), and consumer acceptance (making the product more attractive for local consumers...). These guidelines were distributed to producers and industries concerned.

These guidelines are the tool to transfer the results, among others, of improved processes of production. More than 35 results of improved processes are transferred to the African companies including fermentation control, pasteurizations, smoking and cooking optimizations, formulations,

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packaging, etc... These results are summarized in the D.7.3 Final report on transfer of the improved processes and technologies. For group one (cereal products) the results transferred to the SMEs concern fermentation control, pasteurization, mastering formulation (proportions of cooked/uncooked, etc...) and more generally mastering time and temperature of all the steps. For group two (fish and meat products) the results transferred to SMEs concern smoking/drying/cooking separation and control, safety precautions regarding the raw material (immersion in garlic or salt or ginger bath to limit bacterial proliferation). For group three (plant extract products) the results transferred to SMEs concern pasteurization, optimization of extraction and formulation. For all groups, efforts were made regarding packaging and storage conditions of the final product in order to preserve its qualities and also to be more attractive to consumers.

Specific results to transfer for each 3 groups of traditional products



Website of AFTER project: <http://www.after-fp7.eu/> and website of AFTER Congress www.congressafter.com

Dissemination report describing targets, materials and channels

Workshop and conference reports

Communication tools (flyers, catalogue...)

Presentations of AFTER during fairs and other shows in Africa

AFTER was presented in various fairs and shows in Africa, this participates to the knowledge transfer. Those events are summarized in the table below:

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EVENT	PLACE AND DATE	TARGETS
SIAM 2012 <i>(Salon International de l'Agriculture au Maroc)</i>	Meknes, Morocco 24-28 Apr 2013	General public
AFROEATS <i>(International festival of local products and African cuisine)</i>	Dakar, Senegal 30 April -5 May 2013	General public
FIM 2013 <i>(Foire internationale de Madagascar)</i>	Antananarivo, Madagascar 23-26 May 2013	General public
International Colloque on Agriculture and Food Security	Dakar, Senegal 31 July – 1 August 2013	Oral Communication
Business Forum	Abidjan, Ivory Coast 29-31 October 2013	Oral communication
Foire Internationale de Dakar (FIDAK) –	Dakar (Senegal) 9 December 2013	Oral communication
Forum International sur la promotion des Innovations et des Partenariats dans le secteur de l'agroalimentaire et des agroressources (FINNOVAR)	Dakar, Senegal 16-18 July 2014	Oral communication
Séminaire de Formation sur la vie Associative	Niamey, Niger 18-19 February 2014	General public
Forum AFRICALLIA	Ouagadougou, Burkina Faso 26-28 February 2014	General public
SIAGRO 2014	Dakar, Senegal Mars 2014	General public - Tasting
SIAM 2014	Meknes Maroc 24 Avril- 3Mai 2014	General Public
SIAL 2014	Paris, France 19-23 October 2014	General Public
AFTER Congress	Dakar, Sénégal 11 & 12 November 2014	Researchers, Producers



Conclusion

Various tools of knowledge transfer were identified by the TSMs. These tools were used in the frame of AFTER project to transfer the results of research to SMEs in Europe and in Africa. The organizations responsible for transferring were not the same for the two continents: SPES in Europe and AAFEX in Africa. Therefore, the tools were adapted to each continent and to each target.

Many results were transferable to companies, the tool produced by AFTER project remains the technical guidelines for each product.