

MED7

Thematic Workshops for the definition of the S&T Euro-Mediterranean Policy within FP7

Conclusions of the workshop on Agro-food and Industrial Agriculture held in Montpellier, France, 9-10 June 2005
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1. General framework

Agricultural production is the basic means of ensuring adequate food. Domestic productions together with a predictable and stable trading system are central elements in global and national food security. However, food security does not depend only on farmers and food production. Other factors—the distribution of land, and access to water, to capital, labour, markets and social acceptability—all play a significant role.

In recent years, most of the research initiatives for food security have focused on the four key components of the FAO's definition:

- *Availability* — Providing a sufficient supply of food for all people at all times has historically been a major challenge. Although technical and scientific innovations have made important contributions focused on quantity through intensification of the production, the sustainability of such practices should still be improved.
- *Accessibility* — Equity of access to food is a key dimension of food security. Due to the national and regional gaps in development, inequities have resulted in serious entitlement problems, reflecting class, gender, ethnic, racial, and age differentials. Measures to provide emergency food aid have limited success in overcoming the structural conditions that perpetuate such inequities. The *lack of access* to food is largely considered as “poverty” related and its alleviation may lie in a combination of policies that also include increased local production.
- *Acceptability* — Food and food practices reflect the social and cultural diversity of humanity. Efforts to provide food without paying attention to the cultural role of food in people's lives have failed to solve food-security problems. This dimension of food security is highly important in determining whether information and food-system innovations will be accepted in a country, given the social, cultural and ecological concerns of its citizens.
- *Adequacy* — Food security also requires that adequate measures are in place at all levels of the food chain to guarantee the sustainability of production, distribution, consumption, and waste management. A sustainable food system must maintain ecological integrity and integrate conservation and development

For an other hand, one of the priorities of the 7th framework program is a significant research contribution to the consolidation of the Agro-food sector in Europe while

ensuring high quality, safe and abundant rich food to European citizens and the sustainable use of land and biodiversity. So, the Science and Technology Euro Mediterranean policy must emphasize that this objective must be taken into account for both sides of the Mediterranean Sea, as an instrument for the economical growth of the south non-member states as well as their real participation to the knowledge based society and specifically to the increase of science achievements in the agro-food sector.

To overcome these challenges, answers to following issues have to be sought:

- how to define a “quality” policy in the agricultural and food industry sector ?
- how to evaluate consumer perception of risk and quality ?
- how to identify changes in the role of agriculture in its different externalities and in relation to the expectations of society ?
- which technological procedures should be implemented to satisfy market opportunities and systematic management of agricultural activities ?
- what are the roles of public policies in innovation management and the promotion of exchanges?
- how to make converge short term research for less developed countries needs and front line science focused on bio economy and advanced bioscience ?

2. Specificities of MED countries

The Mediterranean basin is unique, in terms of history, cultural heritage, environment, climate, biological and social economical diversity. To fulfil the aims of EURO-MED partnership the EU should take into consideration the specificities of the Mediterranean region and should make every effort to enable all Mediterranean countries to participate in 7th Framework Programme and thus become integral players in the European Knowledge-based society.

The Mediterranean diet associating specific products and practices would contribute to reduce the incidence of some chronic diseases and to improve the welfare of consumers. Nevertheless, urbanization trends are now determining structural changes in lifestyles and consumption habits. As a consequence, the consumer is often placed in an ambivalent situation between modernity and tradition while lacking information and education. On the other hand, the increasing trading liberalization at local, regional or international level is leading to the widespread of supermarkets, large scale distribution and fast foods.

Private food industry is trying to appropriate for itself the added value to be gotten from the manufacture of traditional foods with acceptable sanitary quality mainly for export markets. But, harvesting and collecting products, processing and trade are carried out by the "formal" as well as by the "informal" sector.

Local food systems offer long-term sustainable solutions, both for the environment and for local and regional economic development. So, preserving and promoting the traditional authentic Mediterranean foods should be a priority. Most of these traditional foods are “home-made” or manufactured in artisan factories. To develop these products on an industrial scale one needs to transform the traditional “know-how” into “knowledge”.

The Mediterranean countries, taken separately or as a geographical area have many assets for the development of the agro-industry

- Diversity of agro-climatic conditions and ecosystems
- Sustained Political and economical support of agriculture and livestock management
 - Irrigation infrastructure
 - Greenhouse equipment
- Expansion of the range of basic products to promote agro-industry
- Rich cultural heritage of traditional foods
 - Traditional foods with potential nutritional and health attributes.
- Growing food produce demand
 - Steady raise in the Local Demand in the processed agricultural products, due to: increasing urbanization of populations; changes in the consumption habits; increase of purchasing power and development of the local market for transformed foods
 - Raise in the Demand worldwide, due to Demographic growth and increasing international market opportunities

At the same time, the specific agro-ecological conditions of the region induce stresses to an already fragile environmental equilibrium, leading risks on:

- Desertification
- Soil erosion
- Limited access to water resources
- Water management
- Drought
- Land management (overgrazing of pasture land
- Agriculture production under conflict situation

3. Common problems and needs

The Mediterranean Countries have an unequal evolution of the agro-industry sector depending on the level of development. Less developed countries face with some common problems:

- Continued reliance on the traditional technological schemes.
 - large dominance by small and medium enterprises (< 200 employees) with limited investment capabilities
 - lack of skilled operators,
- A food sector organized mainly through typically traditional one (domestic market)
- Lack of out reach/extension units
- Weak adoption of hygienic and quality schemes
- Lack of appropriate facilities and laboratory equipment to carry out the required analyses.
- Lack of appropriate programs concerning prospects for innovative processes and novel products.
- Lack of awareness of the impact of research on industry development
- Weak coordination between industry and teaching/research institutions

- Lack of technological watch

A summarised list of common needs to remedy such issues could be the development of:

* Quality control in every step of the food chain;

* Risk management related to:

- drought, fires, floods
- plant and animal diseases
- contaminants
- Emergent diseases

* Access to water and land

* Adequate policies

- Develop and implement appropriate programs concerning prospects for innovative processes and novel products
- Upgrade the skills of the human resources
- Promote marketing of innovative products.
- Good Manufacturing Practices and Hazard Analysis and Critical Control point (HACCP)
- Lack of policies in agricultural and industrial sectors, taking into account health aspects

4. Action plan

Topic 1 : Bio physical environmental and technological development

Objective : to develop "clean" technologies as a response to market needs

- Interaction between farming systems and ecosystems
- Biotic and abiotic stress adaptation of plants, including applied genomics to multi-parallel analysis and data collection, evaluation, interpretation and predictions
- Low input production systems
- Optimal application of agrochemicals, effluents and recycled waste material
- Raw material quality
- Strategy to cope with animal and plant diseases risks
- Assessment of climate hazards (drought, floods, fires, ...)
- Development of appropriate Information and communication technologies (e.g. GIS, data bases, SIT, agri-environmental indicators, ...)

Topic 2 : Promote traditional products

Objective : to explore the science base of traditional food to facilitate development of new processes and technologies that will convert "home-made" to manufactured products that have commercial value and a potential global market.

- Identification and characterization of health benefit to human nutrition together with risk assessment of Mediterranean food.
- Adaptation of new advanced technologies in processing, preservation and food safety of products of great interest to Mediterranean countries.

- Exploring / improving the traditional Mediterranean food quality through innovative technology.
- Biological basis of the effects of Mediterranean environmental stresses (drought, high temperatures and salinity) on plant derived food quality and nutraceutical value.
- Natural and cultivated sustainable fish production in Mediterranean ecosystems.

Topic 3 : Analysis and comprehension of Mediterranean ways of consumption and commercialisation of agro-food products

Objective : to know whether or not and to what extent the Mediterranean diet is still the dietary regime/habit followed by Mediterranean people and to create an appropriate environment conducive to the establishment of synergies among the main stakeholders

- Better understanding of consumers' preferences about traditional and modern food (type of products, nutrients, share of industrial products, consumers practices)
- Quality perception by the consumer (organoleptic, sanitary aspects, nutritional characteristics) for traditional (historical, certified, labelled) and new products (GMO, bio, organic food, functional food, ...)
- Need to develop new methods of information and education for consumers (about labels, quality standards, scientific knowledge, regulations, etc...);
- Establish relationship among main actors across the food chain, and evaluate the interactions with the value chain;
- Understand how modern catering can coexist with the traditional one;
- Assess the role of the informal sector, its organisation, its economic relevance, its impact on the social wellbeing, on the safety and quality of food
- Define the role and the institutional set up in order to guarantee quality, safety and security

Topic 4 : Policy and institutional aspects for sustainable agriculture and rural development

Objective : to develop a comprehensive knowledge-based framework for institutional capacity building to support policy decision making towards sustainable rural livelihoods

- Impact of agricultural, rural and environmental policies
- Medium term effects of cross compliance on rural development
- Impact of norms and standards on trade
- Macroeconomic policies (monetary, fiscal, trade, social, credit ...)
- Develop and strengthen market-based organizations to improve food security and alleviate poverty
- Develop negotiation tools for conflict resolution between rural-urban
- Property rights structure (access to land, water, credit,..., land tenure, ...) and IPR

- Gender issues (role of women in farm management and processing activities)

5. Instruments

"Appropriate" financial instruments to:

- Preserve traditional instruments on specific EUROMED topics : STREP, CA
- Implement calls for proposals targeted to specific MED issues in the collaborative research theme "food, agriculture and biotechnologies", with specific programs to transfer the available tools developed in advanced countries needed for the specific questions of this region
- Include training program within research projects
- Give a special attention toward the MED countries to let them taking part to large initiatives as the Technological Platforms
- Need to simplify administrative procedures to increase research efficiency by making proposals more accessible for non EU Mediterranean countries and by reducing bureaucratic burden on researchers

6. Cross cutting issues for enhancing regional co operation

A general issue is to create an environment that will truly promote exchange of views regarding social and cultural issues associated with food within the region with the aim of alleviating and/or minimising the potential for misunderstanding that may occur as a result of lack of knowledge of the regions diverse cultural heritage:

- Encourage projects that favour regional integration and contribute to ameliorate political stability
- Support national initiatives for up grading scientific and technical skills in preparation to the 2010 free trade area
- Optimize the use of the existing cooperation instruments
- Increase consistency between the CAP and natural resources policies to meet agriculture and environment challenges in MED countries
- Strengthen the existing "centres of excellence" and encourage disseminate scientific, technological and institutional knowledge through networking.